The ACC User Handbook to the AMA "Guides to the Evaluation of Permanent Impairment" 4th Edition

Also known as "The ACC User Handbook to AMA4"

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The ACC User Handbook to the AMA "Guides to the Evaluation of Permanent Impairment" 4th Edition

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Contents

About this User Handbook

The User Handbook

This is ACC's user handbook to the fourth edition of the American Medical Association's "Guides to the Evaluation of Permanent Impairment". [1]

It's for use by ACC's independence allowance and lump sum assessors.

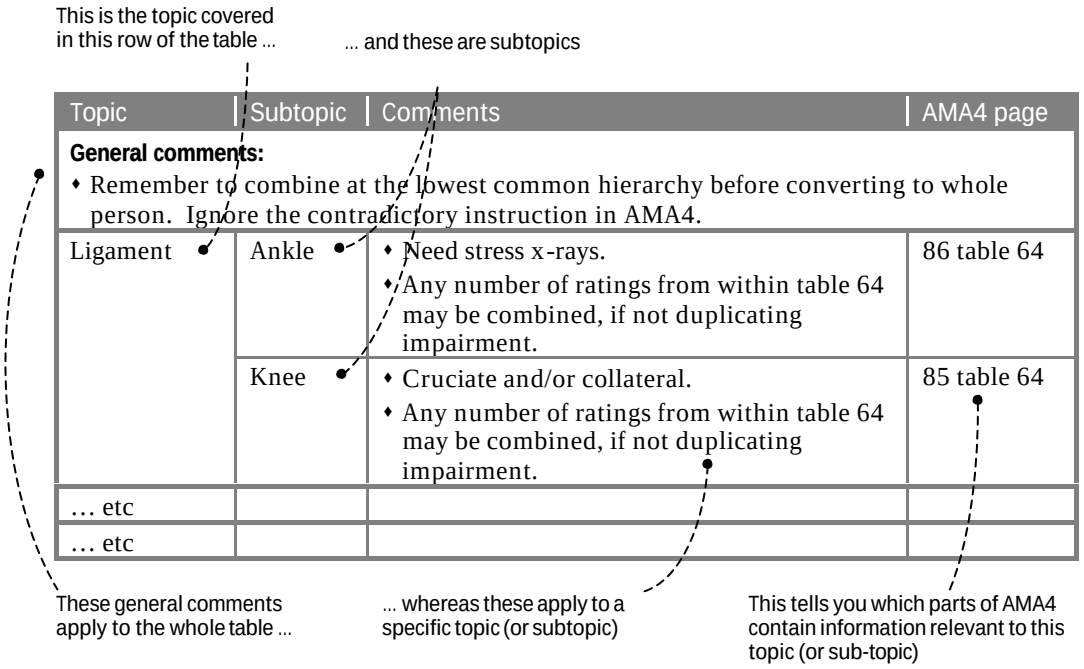
How to use it

Use the User Handbook like this:

- Look up the topic you want in the index starting on page 72.
- If the index specifies an AMA4 reference, go directly to AMA4. Otherwise, continue as follows.
- Go to the page specified in this document and look up the relevant impairment or disorder. (The topics in most of the tables are in alphabetical order.)
- Read the information provided, including any general comments. (If there are any general comments, they'll appear in the first row of the table.)
- When you're familiar with the issues, go to the specified page(s) in your copy of AMA4.
- Read the material in AMA4, and use the tables and charts to calculate the impairment.

Understanding the tables in this document

Many of the tables in this document contain four columns, like this:



If you need help

If you need help, contact the Branch Medical Officer (BMA) at your local branch.

1. Referred to in this document as AMA4.

Assessing impairment

Definition of impairment

In the "Injury Prevention, Rehabilitation and Compensation Act 2001", impairment is defined as:

> "a loss, loss of use, or derangement of any body part, organ system, or organ function"

Note that various definitions of impairment have been used by different organisations at different times. The definitions used by ACC have tended to mirror those used by the World Health Organisation.

Note also that the definitions given in AMA4 (pages 1 and 315) differ from ACC's.

Why use impairment

Impairment provides a fair and equitable basis for determining the level of lump sums and independence allowance. Objective and verifiable criteria are used, in a structured manner, to minimise the possibility of different assessors examining the same person and arriving at different ratings.

Although impairment is the starting point when considering disability or capacity for work, note that impairment, disability, and work capacity are different concepts.

The following highlights the difference between these concepts, using amputation of a little finger as an example:

Concept	Occupation	Impact
Disability	Concert pianist	Very significant
	Gardener	Minor
Work capacity	Concert pianist	Major
	Gardener	None
Impairment	Concert pianist	5%
	Gardener	5%

Keep in mind that individuals will tend to view their impairment from the perspective of its impact upon them personally (that is, their disability). Always explain the difference between impairment and disability, so they may better understand the assessment's outcome. Many assessors find the following formula helpful:

> "What I am rating is the severity of your injury, not the severity of your pain."

Assessment process

The medical assessment of impairment follows this process:

Step		Comments
1	Gather and evaluate relevant information	• Review the following for each condition you've been asked to assess: Medical records Investigations Laboratory findings
2	Read relevant material in this document	• Find the topic you want by using the index (starting on page 72).
3	Read relevant material in AMA4	• This document tells you which pages to refer to.
4	Establish clinical history and examine claimant	
5	Determine impairment for each condition	• Rate the impairment for each condition using the tables and charts in AMA4 and relevant material from this document.
6	Determine whole-person rating	• Using tables in AMA4.

Inconsistency

Keep alert for findings inconsistent with the documentation (for example, unexpectedly good ROM). The following references in AMA4 provide advice on this issue:

Page 8 section 2.2
Page 9 paragraphs 2-3
Page 77 section 3.2e
Page 95 section 3.3a, paragraph 1
Page 112 "General measurement principles"

Note any inconsistency in your report.

Covered conditions

Your assessment should only rate impairment resulting from conditions covered by ACC.

The referral from ACC will indicate which conditions are covered. If you notice anything inconsistent, however, mention it in your report. But don't assess a condition without request from ACC.

Some of the main criteria for cover are:

Entitlement	Criteria
Independence allowance	• Claimant suffered personal injury on or after 1 April 1974. • At least one year after the date of the injury, or condition has stabilised.
Lump sums	• Claimant suffered personal injury on or after 1 April 2002. • At least two years after the date of the injury, or condition has stabilised.

Range finding within tables

Range finding is needed when AMA4 provides a range of percentages, rather than a single percentage. (For an example, see AMA4 page 243 table 4.) Use one of the following approaches to arrive at a specific percentage:

Approach	Comments
Base on criteria above and below	• If the criteria for the range are all satisfied, and the criteria for the range above are almost satisfied, then choose a percentage towards the top of the range. • But, if the criteria are only just satisfied, then choose a percentage towards the bottom of the range.
Base on number of the criteria satisfied	• If there are a number of criteria, but any one of the listed criteria is sufficient, consider basing the percentage on the number of criteria satisfied • For example, if there are three criteria for a 0-9% range, then: If one of the criteria are satisfied, the choice would be 3% If two of the criteria are satisfied, the choice would be 6% If three of the criteria are satisfied, the choice would be 9%

Note: Justify your choice in your report, quoting examples from AMA4 or from this document (starting on page 56) to support your decision.

Apportionment

An impairment may be the result of multiple conditions, not all of which are covered by ACC. In this situation, apportion the percentage into covered and non-covered impairments.

Examples:

Method	Description
Deduct pre-existing impairment	• If possible, analyse the impairment that existed prior to the covered condition occurring, using the following method: ▫ Calculate the pre-existing percentage (base on medical records). ▫ Calculate the percentage that currently exists (from the combination of covered and non-covered conditions). ▫ Deem the difference between the two to be the impairment apportioned to the covered condition. • Note that one figure is deducted from the other. Don't attempt a "reverse combine".
Use clinical judgement	• If it's not possible to calculate the pre-existing impairment, base the apportionment on your clinical judgement, using historical records and your own clinical evaluation. • Very occasionally, you won't feel you can confidently do this. If so, note this in your report.

Also read the following in AMA4:

Page 10 paragraph 2
Page 103 example 2
Page 315 "Apportionment"

Note: If you use apportionment, justify your decision in your report.

Assessing by analogy

In rare circumstances, AMA4 may not quote an impairment rating. If so, determine the rating by comparison with a similar impairment of a similar body site.

Also read AMA4 page 9 paragraph 2 of right hand side.

Note: If you establish a rating by analogy, justify your chosen approach in your report.

Duplicating impairments

Make sure you don't rate the same condition twice.

For example, ROM can occur as a result of significant neurological impairment in an extremity, in which case the rating is based on the impaired nerve. If the impairment is due strictly to nerve dysfunction, don't give an additional rating for ROM at the joint, as that loss is already allowed for in the nerve rating tables.

Prostheses

Read AMA4 page 9 "Using prostheses in evaluations".

Adjustments for effects of treatment or lack of treatment

Read AMA4 page 9 "Adjustments for effects of treatment or lack of treatment".

Report format

Use the following format for your report. (But for mental injury, use the report format on page 41.) Each element must be present, and in the order specified.

Topic		Comments
Background	Assessor details	• Your name and contact details.
	Title of report	• Either: Lump sum report; or Independence allowance assessment report • Indicate in the title if the report is amended.
	Address to referring case manager	
	Appointment details	• Date, time, and duration of appointment. • Date assessment requested by ACC.
	Claimant details	• Name and DOB.
	Injuries	• List injuries for which ACC has requested assessment: Date Injury Claim number
	Documentation	• List documents received and reviewed: Date Source or author • Don't summarise the content of the document in this list.
Condition (cover each condition separately, and repeat for each injury)	Medical history	
	Clinical examination	
	Analysis and discussion	• Include comments and conclusions on: Permanence[2] and stability[3] Clinical examination Adequacy of documentation
	Impairment rating	• For each condition, list: Injury Rating AMA4 reference • In these situations, also justify your rating: Analogy used Range finding used Multiple methods available
	Apportioning (if used)	• See "Apportionment" on page 10 of this document.
	Whole-person rating (for THIS condition)	• Round the whole-person impairment rating to the nearer integer.
Conclusion	Final whole-person rating (for ALL conditions)	
	Signature	• Sign after proof reading.
	Attachments	• For example, upper-extremity work sheet • Note how many attachments are enclosed at the foot of the report.

Notes:

- Make sure you number the pages of the report.
- Don't use names of people, places, schools, etc. That is, avoid using unnecessary identifying data.

2. Permanent impairment means:
   "A loss, loss of use, or derangement of any body part, organ system, or organ function, that is well established and unlikely to change substantially in the next year, with or without further medical treatment."
3. Stability means:
   "Unlikely to improve in the next twelve months."

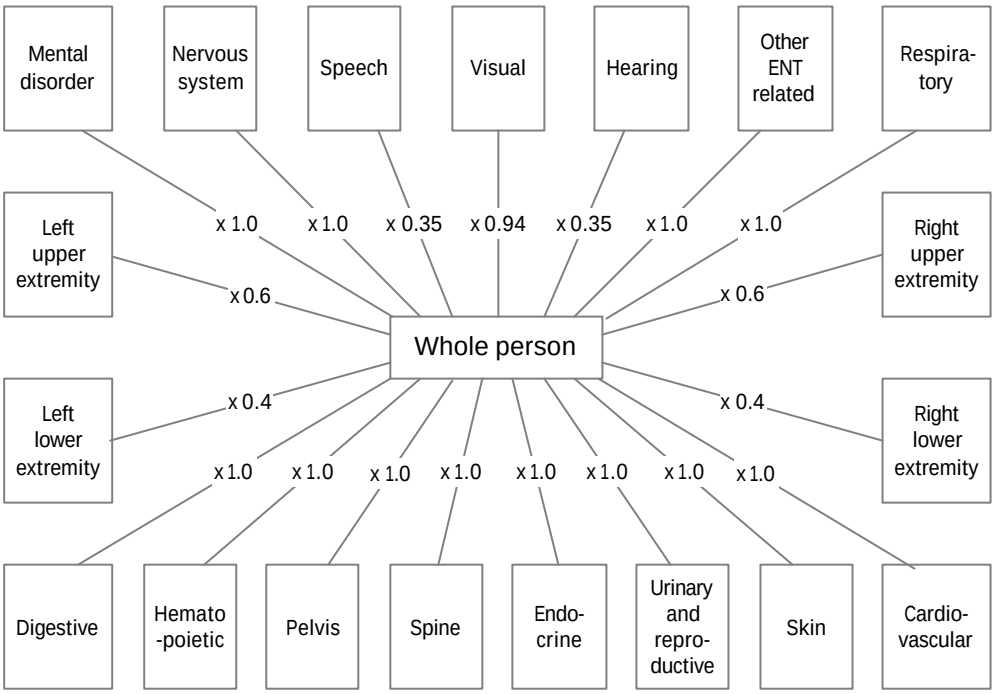
The whole-person concept

The concept of whole-person impairment makes it impossible for an individual to be more than 100% impaired.

Whole-person impairment is expressed as a percentage, ranging from 0-100%. To be 95-100% impaired is to be in a state approaching death.

Functional sub-units

The whole-person is divided into the following functional sub-units:



Based on a model developed by G.T. Davis MD

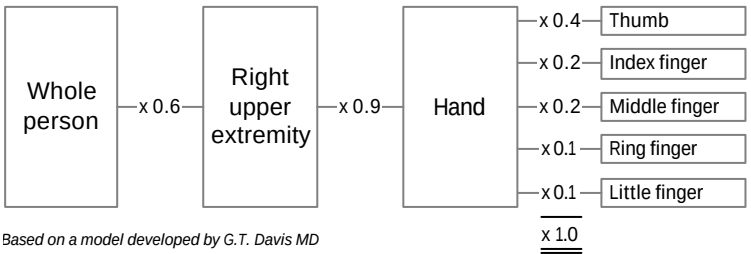
Each sub-unit has a relationship to the whole person. For example, a leg is 40% of the whole person. Note that the left and right arms are separate sub-units, as are the left and right legs.

Further subdivisions

Some of the sub-units have further subdivisions, and there is a hierarchy to these subdivisions. For example:

The (right or left) arm is 60% of the whole person
The hand is part 90% of the (right or left) arm
The thumb is 40% of the hand

This is illustrated below:



Based on a model developed by G.T. Davis MD

Multiple impairments (in same sub-unit)

Three different methods are used when a claimant has multiple impairments within the same sub-unit.

Method	Comments
Adding	• The percentages for impairments are added. • Example: Range of motion impairments at the same upper extremity joint.
Filtering	• The largest of a group of impairment percentages is used to represent the total impairment for the sub-unit. • Example: Cognitive brain functions, where only the largest impairment of the five evaluated impairments is used. • This method ensures that impairments aren't duplicated.
Combining	• Guarantees that the whole-person rating won't exceed 100%. • Is the most commonly used method. • Described in more detail below.

Note: For each sub-unit, AMA4 specifies which method to use.

Combining: How it works

This is how "combining" works:

- If we take an individual with no impairment, and they lose their leg (the impairment value for which is 40%), they now only have 60% of their whole person remaining.
- If they then suffer a further loss of (say) the other leg, that second impairment is deemed to be on the 60% whole person remaining. That is, the whole-person impairment for the second leg is 24% (40% of 60%).
- The total impairment for the loss of both legs is 64% (40% for the first leg, plus 24% for the second).
- The remaining whole person is now 36%.
  (Any further impairments should be applied to 36% of the whole person.)

The method guarantees that the total impairment rating for an individual can't exceed 100%, and can be expressed mathematically as:

Percentage impairment = $A + B(1 - A)$
where A and B are the two impairment values being combined

Notes:

- The "Combined values chart" on pages 322-324 of AMA4 allows easy application of the formula.
- When dealing with impairments that affect several parts or the same sub-unit, always start at the lowest level first, then move progressively up the hierarchy. (For example, finger, hand, upper extremity.)

AMA4 references

How to use this chapter

Use this chapter as follows:

Step	Action
1	• Go to the Contents on page 4 and select a body system (under "AMA4 references").
2	• Go to the page number specified (in this document). For example, "ENT and related disorders" on page 25.
3	• Select a topic (for example, "Facial structure").
4	• Read the comments for that topic (if any), then go to the AMA4 pages specified.

Autonomic nervous system

Topic	Subtopic	Comments	AMA4 page
ANS			142 section 4.1e 151 section 4.4d
Syncope			152 table 22 151 section 4.4d 142 section 4.1e
Transient loss of awareness			152 table 22 151 section 4.4d 142 section 4.1d 143 paragraph 4

Brain and cranial nerves

What this covers

This covers the brain and cranial nerves. The peripheral nervous system is covered on page 43 of this document, and the spine on page 48.

Assessment process

The assessment process for brain injuries is as follows:

Step	Comments

1 Interview the claimant	• Expected output = several pages in report.
	• Present your report as a narrative. Don't just enclose the checklist on page 18.
	• It is expected that the claimant will be accompanied at the interview by someone who's known them before and after the injury, to help you obtain collateral history.
	• If this isn't possible:
	  ▫ Explain why not in your report.
	  ▫ Also try to identify someone to obtain collateral information from (for example, by telephone).

2 Physically examine the claimant	
3 Determine the impairment rating	• The criteria are defined by the restrictions or limitations the impairment imposes on the patient's ability to independently carry out activities of daily living (except for some specific injuries like vision and hearing loss).

Note: An example of the report you should prepare is given on page 11.

What next

Continue as follows:

- Use the checklists on the following pages:

  Interview the claimant
  Physically examine the claimant
  Determine the impairment rating

- Then refer to the summary of AMA4 references on page 21 of this document.
- When you're ready, use the worksheet on page 68 of this document to record your results.

Interview the claimant

Topic	Checklist
Current personal circumstances	• Marital status • Living arrangement • Partner (including their occupation) • Children • Occupation (or, how they fill in the day) • Finances (security, in debt?)
Personal history	• Childhood • Milestones • Parents (relationship, occupation, treatment of children) • School and work history (self, siblings, parents) • Relationships
Medical history	• Current medication • Psychiatric history • Drugs, alcohol, forensic • Significant medical conditions (hospital, prolonged medication)
Mental status examination	• Appearance • Behaviour (normal, agitated, retarded, cooperative, appropriate) • Attitude (rapport, eye contact, frank, friendly, hostile, guarded) • Talk (monotone, limited, verbose, pressured, derail, circumlocution) • Thought (psychotic, manic, depressed) • Affect • Mood (manic, depressed, angry, anxious, suspicious, euthymic, irritability, panic attacks, suicide, confidence, self esteem)
Activities for daily living (ADL)	• Self care • Communication • Travel (able to drive car or use public transport) • Sexual • Development and maintenance of close relationship • Shopping (memory, handling money, need assistance) • Eating • Sleep • Maintain residence • Hobbies, music, video, TV, reading, handicraft, garden
Social functioning	• Able to maintain social norms. Disinhibition. • Gets on with neighbours, shopkeepers, co-workers, etc • Circle of friends (visit them, have visitors) • Initiates social contacts • Goes out to social functions • Groups (sports, church, etc) • Cooperative and considerate • Socially responsible (care for others) • Negotiation and compromise • Able to participate in group conversations • Noise intolerance

<table>
<tr><th>Topic</th><th>Checklist</th></tr>
<tr><td>Cognition</td><td>
• Task completion at home or work
• Planning and organising
• Decisions
• Judgement
• Bank account, budget
• Concentration
• Memory
Read and remember books
Watch and remember TV, serials
Watch and remember movies
Keep a diary
Safe alone (leave taps running or elements on)
• Folstein's (see below).

Folstein's mini mental-status exam
<table>
<tr><td>Orientation</td><td>Year, season, date, day, month</td><td>5</td></tr>
<tr><td></td><td>Country, city, suburb, PM, deputy PM</td><td>5</td></tr>
<tr><td>Registration</td><td>Ball, flag. Tree
Get to repeat once (tests attention and registration)</td><td>3</td></tr>
<tr><td>Calculation</td><td>100-7=93, 86, 79, 72, 65
OR: Spell "world" backwards (="dlrow")
Tests attention and concentration</td><td>5</td></tr>
<tr><td>Recall</td><td>Ball, flag, tree (up to 6 tries)
Tests short-term memory</td><td>3</td></tr>
<tr><td>Language</td><td>Name simple objects (pencil, watch)</td><td>2</td></tr>
<tr><td></td><td>Repeat (no ifs, ands, buts). One try.</td><td>1</td></tr>
<tr><td></td><td>"Take paper in right hand, fold in half, and place on desk"
(Tests ability to follow simple three-step instruction)</td><td>3</td></tr>
<tr><td></td><td>Read, "close your eyes", and follow instruction</td><td>1</td></tr>
<tr><td></td><td>Write a sentence (with verb and noun)</td><td>1</td></tr>
<tr><td></td><td>Copy design (intersecting pentagons)
Must have all five angles present</td><td>1</td></tr>
<tr><td></td><td>TOTAL</td><td>30</td></tr>
</table>
Score = 22/30: Suspect cognitive impairment
Score = 17/30: Definite cognitive impairment
For further information, see:
▫ Folstein, Folstein & McHugh, Journal of Psychiatric Research 1975 Vol 12 pp 189-198
▫ International Psychogeriatrics 1997 Vol 9, Supplement 1 pp 87-94
</td></tr>
<tr><td>Fatigue or sleep disorder</td><td>• Ask specifically about fatigue, which is an important post head-injury symptom for which AMA4 doesn't make a specific allowance.</td></tr>
<tr><td>Seizure</td><td></td></tr>
<tr><td>Headache</td><td></td></tr>
<tr><td>Pain</td><td>• Record reported thalamic pain, phantom limb pain, and causalgia. (See AMA4 page 140 "Sensory disturbances".)</td></tr>
</table>

Physically examine the claimant

Part of body		Topic	Checklist
Cranial nerves • See AMA4 pages 144-147 section 4 (including tables 7-12) for cranial nerve general information.			
I	Olfactory	Smell	• Test each nostril separately (coffee or soap) • Don't use an irritant, because it will stimulate the pain fibres of the trigeminal nerve.
II	Optic	Vision	• Visual acuity (corrected) — near and distant • Optic fundi: Visual media Optic discs Blood vessels Retina and macula
		Visual fields	• By confrontation • Screen, using small finger movements • Precise delineation will require optometry report
III IV VI	Oculomotor Trochlear Abducens	External ocular movements	• Diplopia, dysconjugate movements • Nystagmus • Ptosis • Pupils (size, shape, response to light, convergence)
V	Trigeminal	Facial sensation	
		Corneal reflexes	
		Masseter and ptyerygoid muscles	
		Jaw jerk	
VII	Facial	Facial movements	• To command (any symmetry) • Involuntary (as in smiling)
		Taste on anterior 2/3 tongue	• Sweet, salt, bitter
VIII	Acoustic (auditory)	Hearing	• Auditory acuity (whisper) • Tuning fork tests (if deaf) • External auditory canals and TM
		Vestibular (balance)	
		Vertigo	
1X	Glosso-pharyngeal		
X	Vagus	Palatal and pharyngeal movements	• Swallowing
		Laryngeal movements	• Voice, high "eee", cough
XI	Accessory	Sternomastoid	• Turn head
		Trapezius	• Shrug shoulder
XII	Hypoglossal	Tongue	• Wasting, fasciculation, weakness, rapidity of movement

Notes:
- Record all positive findings, and only significant negatives.
- Set out the results on a copy of the "Brain and cranial nerves worksheet" (page 68).

Part of body	Topic	Checklist
Limbs, trunk, skull, and scalp		
Motor system	Look	• Wasting, fasciculation, posture, involuntary movements, gait, balance • Record observations of functional impairment of limbs as per AMA4 page 147 section 4.3a and page 148 section 4.3b (including tables 13-15).
	Muscle tone	• Any clonus?
	Muscle power	• Set muscle group, and attempt to overcome it • Compare sides
	Coordination	• Rapid alternating movements • Point-to-point movements (heel/knee/shin and finger/nose/finger)
	Tendon reflexes	• Arms: Biceps C5-6 Brachioradialis (supinator) jerk C5-6 Triceps C7 • Legs: Knee L3-4 Ankle L5-S1 Plantar response
Sensation		• Touch, prick, temp, proprioception, vibration
Skull and scalp		• Size, shape, scars, lumps, tenderness

AMA4 references

Category	Comments	AMA4 page
1 Consciousness and awareness		142 table 4 142 section 4.1 d 143 "Transient loss of awareness or consciousness" 151 section 4.4d 152 table 22
2 Aphasia and communication		141 table 1 141 section 4.1a
3 Mental status and integrative functioning		142 table 2 141 section 4.1b
4 Emotional and behavioural		142 table 3 141 section 4.1c
5 Preoccupation or obsession	• As AMA4 doesn't provide a table for this, use the table of page 69 of this document instead.	
6 Major motor and sensory	• For sensory abnormality, refer to the relevant section in this document (Vision, etc).	
	• For trigeminal neuralgia	145 table 9
	• For the trigeminal nerve (but not trigeminal neuralgia), use the table on page 69 of this document.	
	• For cranial nerves	144-147 tables 7-12
	• For other motor and sensory abnormality	147 section 4.3a 148 section 4.3b 148 table 13-15
	• For facial movements	230 table 4
7 Movement disorders	• For example, tremors, chorea, athetosis, hemiballismus, dystonia tone.	140 "Motor disturbances" 147 section 4.3a 148 section 4.3b 148 table 13-15
8 Episodic neurologic		143 table 5 142 section 4.1e
9 Sleep, arousal, fatigue		143 table 6 143 "Arousal and sleep disorders"

Cardiovascular

Topic	Subtopic	Comments	AMA4 page
Cardiac arrhythmia			195 table 12
Cardiomyopathies			189 table 10
Congenital heart disease			181 table 8
Coronary heart disease			178 table 6
Deep vein thrombosis			196 section 6.8 197 table 13 198 table 14
Hypertensive cardiovascular disease			187 table 9
Lymphoedema			196 section 6.8 198 table 14
Pericardial heart disease			192 table 11
Peripheral vascular disease	Lower extremity	• The quoted ratings are for lower extremity only, not for whole person.	198 table 14
	Upper extremity	• The quoted ratings are for upper extremity only, not for whole person.	197 table 13
Valvular heart disease			173 table 5
Varicose veins			196 section 6.8 198 table 14

Digestive system

Topic	Subtopic	Comments	AMA4 page
Digestive tract	Lower		241 table 3 243 table 4
	Upper		237 table 1 239 table 2
Enterocutaneous fistula			243 section 10.6 including table 5 … plus … 239 table 2; or 241 table 3
Hepatitis			245 table 6 237 table 1
Hernias of abdominal wall			247 table 7
Liver and biliary tract			245 table 6 237 table 1

Endocrine system

Topic	Subtopic	Comments	AMA4 page
General comments: ♦ Combine rating with that for affected end organs.			
Adrenal gland	Cortex		269 section 12.4 269 table 3 270 table 4
	Medulla		270 section 12.5 270 table 5
Glucose metabolism (pancreas)			270 section 12.6
Gonadal function			274 section 12.7
Hypothalamic / Pituitary axis			264 section 12.1
Mammary glands			275 section 12.8
Metabolic bone disease			275 section 12.9
Parathyroid			268 section 12.3 including table 1 269 table 2
Thyroid function			267 section 12.2

ENT and related disorders

Topic	Subtopic	Comments	AMA4 page
Amputation	Ear Nose		230 table 4
Chewing and swallowing			231 table 6 147 table 12
Equilibrium / vestibular system			228 section 9.1c 146 table 11
Facial structure		• Integrity or disfigurement. • Make sure you also read the text at the start of page 230. • Browline is the eyebrow line, not the hairline.	229 section 9.2 230 table 4 146 table 10
Hearing loss	General comments	• Conversion of hearing system whole person is on AMA4 page 228 table 3.	
	Binaural loss	• On the horizontal and vertical axes of table 2, read "100" as "100 or less".	226 table 2
	Monaural loss	• Don't use monaural. Use Binaural instead.	
	Tinnitus	• Value for tinnitus (0-5) should be added to the WPI for HL.	224 paragraph 2 146 paragraph 2 in right column
Otorrhoea or otalgia		• If chronic (that is, more than three months).	224 paragraph 1
Respiratory dysfunction		• If secondary to air passage defects. • Make sure you read the footnotes.	231 table 5
Smell and taste			231 section 9.3c 146 table 10
Speech		• Also see "Otorrhoea or otalgia" in this table. • The instructions on using the table are on page 234.	233 table 7
Stoma			231 table 5 footnote
Teeth		• Rate as per dietary restriction. • Rate as per speech impairment.	231 section 9.3b including table 6
Temperomandibular joint		• Rate as per impact on functions of chewing and speed (see this page). • See also Trigeminal nerve on pages 20 and 69 of this document.	230 section 9.3 "The oral region"
Tracheostomy			231 table 5 footnote

Haematopoietic system

Topic	Subtopic	Comments	AMA4 page
HIV			203-204 “Lymphocytes”
Spleen / splenectomy			205 section 7.4
Warfarin			207 section 7.7
Other			201 chapter 7

Lower extremity (including pelvis)

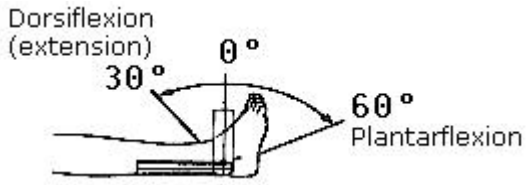
Topic	Subtopic	Comments	AMA4 page
General comments: • Remember to combine at the lowest common hierarchy before converting to whole person. Ignore the contradictory instruction in AMA4. • When using DRE, the descriptor within the table applies to a combination of diagnosis and current presentation. (For example, a history of ruptured cruciate ligament of the knee only attracts an impairment rating if residual laxity persists at the time of assessment.) • The "Other musculoskeletal system defects" section on pages 63-64 of AMA4 allows the percentage to be increased if the severity of the clinical findings doesn't correspond with the extent of the musculoskeletal defect. Use this only rarely, and don't exceed 3% WPI (to be consistent with AMA4 page 9 "Adjustments for effects of treatment or lack of treatment"). • For the pelvis, consider combining with a rating for urinary and reproductive function, if this is also impaired. • When combining within the lower extremity, use the table on page 67 of this document.			
Amputation	General comments	• An amputation rating may be combined with ROM rating of the associated joint. • Consider rating for skin loss, also, as the stump is now a weight-bearing area.	
	All joints	• The main reference is table 63. • The entry for Syme (foot) should read 28% 70% 100%.	83 table 63
		• Skin loss.	88 section 3.2j including table 67
Ankylosis / arthrodesis	All joints	• Read the introductory text on page 79. • Then read the text for the appropriate joint (Hip, Knee, etc). • Then use the tables. • Make sure you read the footnotes.	79-82 including tables 46-61
		• Estimates for arthritic and ROM impairments don't apply to ankylosis/arthrodesis injuries.	81 example at bottom right
	Calcaneum (os-calcis)	• Measure the tibia-os calcis angle from an x-ray of the ankle in the neutral position. • Use these references where the joint is ankylosed. Don't use them if there is still movement. (See Fracture, Hind foot instead, and use AMA4 page 85 table 64.)	79-82 including tables 46-61 81 table 60 91 figure 57

… continued on next page

Topic	Subtopic	Comments	AMA4 page
General comments: • Remember to combine at the lowest common hierarchy before converting to whole person. Ignore the contradictory instruction in AMA4. • When using DRE, the descriptor within the table applies to a combination of diagnosis and current presentation. (For example, a history of ruptured cruciate ligament of the knee only attracts an impairment rating if residual laxity persists at the time of assessment.) • The "Other musculoskeletal system defects" section on pages 63-64 of AMA4 allows the percentage to be increased if the severity of the clinical findings doesn't correspond with the extent of the musculoskeletal defect. Use this only rarely, and don't exceed 3% WPI (to be consistent with AMA4 page 9 "Adjustments for effects of treatment or lack of treatment"). • For the pelvis, consider combining with a rating for urinary and reproductive function, if this is also impaired. • When combining within the lower extremity, use the table on page 67 of this document.			
Arthritis	Rating methods	• The principal methods for rating arthritis are: ▫ ROM; and ▫ Loss of cartilage interval as determined by weight-bearing x-rays. • Crepitation can also be considered for the knee.	
	Notes on the rating methods	• ROM: ▫ There are some patients with arthritis for whom loss of motion is the principal impairment. • Loss of cartilage interval: ▫ This method correlates well with disease progression, as most patients with arthritis are impaired by pain and weakness secondary to advanced joint surface degeneration. ▫ Don't use this method if there is a flexion contracture of the hip or knee (use the ROM method instead). ▫ Don't routinely order X-rays. They are only indicated where there are clinical signs of arthritis, or where there is clinical documentation reporting arthritis. • Crepitation: ▫ See the footnote to AMA4 page 83 table 62.	
	Other general comments	• The selected arthritis impairment rating may be combined with a diagnosis-related estimate in situations where the injury involves a fracture in or about a joint. (See the last paragraph of AMA4 page 82 and the last paragraph of AMA4 page 84 column 1.) • The arthritis rating may also be combined with leg length discrepancy.	
	All joints		83 table 62 82 section 3.2g
	Foot	• If the specific joint isn't included in table 62, consider rating by analogy.	
Atrophy			77 table 37 76 section 3.2c
Bursitis	Trochanteric	• Any number of ratings from within table 64 may be combined, if not duplicating impairment.	85 table 64
	Ischial	• Any number of ratings from within table 64 may be combined, if not duplicating impairment.	85 table 64
Crepitation	Knee	• Direct patella trauma, with patellofemoral pain, crepitation on physical examination and no joint space narrowing on x-ray	83 footnote to table 62
Deformity	Mid foot	• Any number of ratings from within table 64 may be combined, if not duplicating impairment.	86 table 64

Topic	Subtopic	Comments	AMA4 page
General comments: • Remember to combine at the lowest common hierarchy before converting to whole person. Ignore the contradictory instruction in AMA4. • When using DRE, the descriptor within the table applies to a combination of diagnosis and current presentation. (For example, a history of ruptured cruciate ligament of the knee only attracts an impairment rating if residual laxity persists at the time of assessment.) • The "Other musculoskeletal system defects" section on pages 63-64 of AMA4 allows the percentage to be increased if the severity of the clinical findings doesn't correspond with the extent of the musculoskeletal defect. Use this only rarely, and don't exceed 3% WPI (to be consistent with AMA4 page 9 "Adjustments for effects of treatment or lack of treatment"). • For the pelvis, consider combining with a rating for urinary and reproductive function, if this is also impaired. • When combining within the lower extremity, use the table on page 67 of this document.			
Fracture	All joints	• Any number of ratings from within table 64 may be combined, if not duplicating impairment.	85-86 table 64
	Femoral shaft		86 table 64
	Pelvis		85-86 table 64 131 section 3.4
	Hind foot	• For the hind foot, also check these references. • For loss of tibia-os calcis angle: ▫ Needs x-ray of the ankle in the neutral position. ▫ Measure by os-calcis angle as per figure 57. ▫ If tibia-os calcis still has movement, rate as per table 64. Otherwise, see Ankylosis / arthrodesis above.	85 table 64 91 figure 57
	Tibial plateau	• Persisting displacement that isn't angulated (for example, depressed fracture). • May be rated by analogy with angulation.	
	Tibial shaft		86 table 64
Gait	General comments	• This method of assessment should be used only rarely (see text on AMA4 page 75). Always prefer the methods most fitting the nature of the injury. • Change the figures in sections i, j, and k of table 36 to i=55% j=60% k=64%. • The value for k is then equivalent to bilateral leg amputation (40% combined with 40% = 64%), which then satisfies the whole person model. • Don't combine the gait table with any other lower extremity ratings.	
	All joints		75 section 3.2b 76 table 36
Girdlestone arthroplasty	Hip	• Any number of ratings from within table 64 may be combined, if not duplicating impairment.	85 table 64
Hemipelvectomy	Pelvis		83 table 63 131 section 3.4
Leg length discrepancy	General comments	• When LLD is determined clinically, the method used must be indicated. For example, tape measure from ASIS to lateral malleolus, or levelling of pelvis using blocks under short leg. • Clinical assessment of LLD is an acceptable method, but if CT films are available, they should be used in preference. Such an examination should not be ordered solely for determining leg lengths. • LLD can be combined with any other lower extremity rating, except gait and amputation.	
	All joints		75 table 35

Topic	Subtopic	Comments	AMA4 page
General comments: • Remember to combine at the lowest common hierarchy before converting to whole person. Ignore the contradictory instruction in AMA4. • When using DRE, the descriptor within the table applies to a combination of diagnosis and current presentation. (For example, a history of ruptured cruciate ligament of the knee only attracts an impairment rating if residual laxity persists at the time of assessment.) • The "Other musculoskeletal system defects" section on pages 63-64 of AMA4 allows the percentage to be increased if the severity of the clinical findings doesn't correspond with the extent of the musculoskeletal defect. Use this only rarely, and don't exceed 3% WPI (to be consistent with AMA4 page 9 "Adjustments for effects of treatment or lack of treatment"). • For the pelvis, consider combining with a rating for urinary and reproductive function, if this is also impaired. • When combining within the lower extremity, use the table on page 67 of this document.			
Ligament	Ankle	• Need stress x-rays. • Any number of ratings from within table 64 may be combined, if not duplicating impairment.	86 table 64
	Knee	• Cruciate and/or collateral. • Any number of ratings from within table 64 may be combined, if not duplicating impairment.	85 table 64
Meniscus	Knee	• Medial and/or lateral meniscectomy. • Any number of ratings from within table 64 may be combined, if not duplicating impairment.	85 table 64
Osteomyelitis		• If chronic (that is, greater than 3 months).	88 table 67
Patella	Knee	• Subluxation, dislocation, patellar fracture, patellectomy. • Any number of ratings from within table 64 may be combined, if not duplicating impairment.	85 table 64
Peripheral nervous system		• Make sure you read the procedures under tables 20-21. • In step 6 of the procedure under table 20, "whole person" should read "lower extremity".	88 section 3.2k 89 table 68 93 figures 59-60 130 table 83 151 table 20-21
Peripheral vascular disease		• Use the table in AMA4's cardiovascular chapter.	198 table 14
Proximal tibial osteotomy	Knee	• Any number of ratings from within table 64 may be combined, if not duplicating impairment.	85 table 64
Replacement	Hip Knee	• When assessing distanced walked: 1 block = 100 metres • Any number of ratings from within table 64 may be combined, if not duplicating impairment.	85 table 64 87 table 65 88 table 66

Topic	Subtopic	Comments	AMA4 page
General comments: • Remember to combine at the lowest common hierarchy before converting to whole person. Ignore the contradictory instruction in AMA4. • When using DRE, the descriptor within the table applies to a combination of diagnosis and current presentation. (For example, a history of ruptured cruciate ligament of the knee only attracts an impairment rating if residual laxity persists at the time of assessment.) • The "Other musculoskeletal system defects" section on pages 63-64 of AMA4 allows the percentage to be increased if the severity of the clinical findings doesn't correspond with the extent of the musculoskeletal defect. Use this only rarely, and don't exceed 3% WPI (to be consistent with AMA4 page 9 "Adjustments for effects of treatment or lack of treatment"). • For the pelvis, consider combining with a rating for urinary and reproductive function, if this is also impaired. • When combining within the lower extremity, use the table on page 67 of this document.			
ROM (except ankylosis)	General comments	• Measure active ROM (not passive). • Use a goniometer. • ROM is subject to variation because of pain during motion at different times of examination, and possible lack of cooperation. If inconsistency exists, then either: ▫ Don't use it; or ▫ Note the situation in your report. See page 9 of this document for further comment on inconsistency. • Select a rating for each movement and combine at the lower-extremity level before conversion to whole person.	
	All joints		78 tables 40-45 90-92 figures 52-58
		Notes on figure 56 • Figure 56 should look like this:  • When measuring dorsiflexion (extension) and plantarflexion, perform measurements with leg straight, and again with knee at 45°, and take the average.	
	Ankle Hind foot	• For tibia-os calcis angle, don't use page 81 table 60, unless ankylosed.	78 table 44 86 table 64
	Knee		78 table 41
Skin loss Ulcer		• For osteomyelitis, chronic = three months or longer. • For ulcer, also see: Peripheral vascular disease (above) Peripheral nervous system (page 43)	88 table 67 88 section 3.2j
Weakness		• Table 38 is the grading table for table 39. • Table 21 is the grading table for tables 68 and 83.	76 section 3.2d 77 tables 38-39 89 table 68 130 table 83 151 tables 21

Mental and behavioural

ACC policy

The Accident Insurance Act 1998 describes mental injury as a clinically significant behavioural, cognitive, or psychological dysfunction.

ACC covers mental injury in the following situations:

- Sexual abuse[4] from which mental injury has arisen; and
- Cases where mental injury arises from physical injury. (To be covered, the mental injury must arise from the physical injury itself, not the circumstances within which the injury was sustained.)

When a claimant with mental injury cover seeks entitlement, ACC's policy is to confirm by psychiatric assessment that the claimant is suffering a mental injury as diagnosable by DSM IV (chapter 14).

Note: Mental injury assessments are only to be done by specially trained assessors.

General approach

For independence allowance and lump sums, assessment of mental injury is based on the four functional categories set out in AMA4, which are:

Activities of daily living
Social functioning
Concentration, persistence, and pace
Adaptation, decompensation

Notes:

- As with physical injuries, the focus of the impairment rating is on impairment of the individual's independence.
- For assistance with range finding within a class, see page 9 of this document and the examples starting on pages 56. For assistance with apportionment, see page 10.

As AMA4 doesn't provide a specific assessment tool or rating system, use the method described below. (Don't use chapter 4 of AMA4.)

Assessment process

The assessment process for mental injury is as follows:

Step	Description	Where documented
1	Interview the claimant	Page 34 of this document
2	Rate the functional categories (as listed above)	Page 36 of this document
3	Rate the overall impairment	Page 40 of this document

In addition, the report format is discussed on page 41 of this document.

4. Note that ACC prefers the term "sensitive issue".

Interview the claimant

Topic	Checklist
Current personal circumstances	• Marital status • Living arrangement • Partner (including their occupation) • Children • Occupation (or, how they fill in the day) • Finances (security, in debt?)
Personal history	• Childhood • Milestones • Parents (relationship, occupation, treatment of children) • School and work history (self, siblings, parents) • Relationships
Medical history	• Current medication • Psychiatric history • Drugs, alcohol, forensic • Significant medical conditions (hospital, prolonged medication)
Mental status examination	• Appearance • Behaviour (normal, agitated, retarded, cooperative, appropriate) • Attitude (rapport, eye contact, frank, friendly, hostile, guarded) • Talk (monotone, limited, verbose, pressured, derail, circumlocution) • Thought (psychotic, manic, depressed) • Affect • Mood (manic, depressed, angry, anxious, suspicious, euthymic, irritability, panic attacks, suicide, confidence, self esteem)
Activities for daily living (ADL)	• Self care • Communication • Travel (able to drive car or use public transport) • Sexual • Development and maintenance of close relationship • Shopping (memory, handling money, need assistance) • Eating • Sleep • Maintain residence • Hobbies, music, video, TV, reading, handicraft, garden
Social functioning	• Able to maintain social norms. Disinhibition. • Gets on with neighbours, shopkeepers, co-workers, etc • Circle of friends (visit them, have visitors) • Initiates social contacts • Goes out to social functions • Groups (sports, church, etc) • Cooperative and considerate • Socially responsible (care for others) • Negotiation and compromise

<table>
<tr><th>Topic</th><th colspan="3">Checklist</th></tr>
<tr><td>Concentration, persistence, and pace</td><td colspan="3">
• Task completion at home or work
• Planning and organising
• Decisions
• Judgement
• Bank account, budget
• Concentration
• Folstein's (see below). Only use if suspected decrease in cognition.
</td></tr>
<tr><td></td><td colspan="3">Folstein's mini mental-status exam</td></tr>
<tr><td></td><td>Orientation</td><td>Year, season, date, day, month</td><td>5</td></tr>
<tr><td></td><td></td><td>Country, city, suburb, PM, deputy PM</td><td>5</td></tr>
<tr><td></td><td>Registration</td><td>Ball, flag. Tree
Get to repeat once (tests attention and registration)</td><td>3</td></tr>
<tr><td></td><td>Calculation</td><td>100-7=93, 86, 79, 72, 65
OR: Spell "world" backwards (="dlrow")
Tests attention and concentration</td><td>5</td></tr>
<tr><td></td><td>Recall</td><td>Ball, flag, tree (up to 6 tries)
Tests short-term memory</td><td>3</td></tr>
<tr><td></td><td>Language</td><td>Name simple objects (pencil, watch)</td><td>2</td></tr>
<tr><td></td><td></td><td>Repeat (no ifs, ands, or buts). One try.</td><td>1</td></tr>
<tr><td></td><td></td><td>"Take paper in right hand, fold in half, and place on desk"
(Tests ability to follow simple three-step instruction)</td><td>3</td></tr>
<tr><td></td><td></td><td>Read, "close your eyes", and follow instruction</td><td>1</td></tr>
<tr><td></td><td></td><td>Write a sentence (with verb and noun)</td><td>1</td></tr>
<tr><td></td><td></td><td>Copy design (intersecting pentagons)
Must have all five angles present</td><td>1</td></tr>
<tr><td></td><td></td><td>TOTAL</td><td>30</td></tr>
<tr><td></td><td colspan="3">
Score = 22/30: Suspect cognitive impairment
Score = 17/30: Definite cognitive impairment
For further information, see:
▫ Folstein, Folstein & McHugh, Journal of Psychiatric Research 1975 Vol 12 pp 189-198
▫ International Psychogeriatrics 1997 Vol 9, Supplement 1 pp 87-94
</td></tr>
<tr><td>Adaption /decomposition</td><td colspan="3">
• What causes stress?
▫ Unexpected change in routine
▫ Conflict
▫ Dealing with authority figures (bank, ACC, employer)
▫ Major life change (death, divorce, changing jobs)
• How does stress manifest?
▫ Nil noticeable response
▫ Withdraw socially
▫ Impairment of home role
▫ Impairment of work role (still attending?)
▫ Mood change (irritable, angry, depressed, anxious)
• How is it managed?
▫ Take in stride (that is, adapts to stress)
▫ Walk, bath, music (that is, copes with stress)
▫ Alcohol, drugs
▫ Counsellor, help line, friend
▫ Doctor, medication
▫ Psychiatric help

EFFECTS: "I've nearly finished with the questions I want to ask, and we've covered a lot of ground. But I'd like you to tell me how you think the sexual abuse you suffered still affects you today.
</td></tr>
</table>

Rate the functional categories (activities of daily living)

Class	Impairment	Comments	Rating
General comments: • This refers to activities confined to the immediate home environment. • Judge the quality of these activities by independence, effectiveness, appropriateness, and sustainability. • Read AMA4 page 300 section 14.7 on evaluating psychiatric impairment.			
I	Nil / minimal	• Able to be effectively independent most of the time. • Any minor deficit of function could reasonably be attributed to normal variation within the general population. • Examples: ▫ Copes adequately with everyday problems. ▫ Possibly mild impairment (such as anxiety) in situations requiring high self esteem. ▫ May occasionally look unkempt or miss a meal.	0–9%
II	Mild	• Independent, but in some areas functioning is not particularly effective. • Impairment levels compatible with some (but not all) useful functioning. • Examples: ▫ Can cook and clean. ▫ Can hold down a job or run a household. ▫ May have difficulty with relationships, travel, recreation. ▫ May be difficult to live with.	10–35%
III	Moderate	• Independent, but not effective in all or many areas of function. • Impairment levels significantly impede useful functioning. • Examples: ▫ Can cook and clean. ▫ Fearful of leaving home even for doctor's appointments, shopping, etc. ▫ May not answer telephone or door. ▫ Unable to develop or maintain intimate relationships.	36–60%
IV	Marked	• Is only able to live independently with some sort of regular or intermittent support. • Impairment levels significantly impede useful function. • Examples: ▫ Needs prompting to shower regularly and to wear clean clothes. ▫ Struggles to prepare own meals or frequently misses meals.	61–79%
V	Extreme	• Complete dependence on another person at all times. • Analogous with institutional living (for example, permanent patient in a psychiatric hospital).	80–100%

Rate the functional categories (social functioning)

Class	Impairment	Comments	Rating
General comments: • This relates to the claimant's effective and appropriate interaction with the general public and society at large. • Is the claimant able to maintain society's norms? Has there been a history of altercations, evictions, firings, fear of strangers, avoidance of interpersonal relationships, social isolation? • Read AMA4 page 300 section 14.7 on evaluating psychiatric impairment.			
I	Nil / minimal	• Able to be effectively independent most of the time. • Any minor deficit of function could reasonably be attributed to normal variation within the general population. • Examples: ▫ Anxiety in certain situations, such as a job interview.	0–9%
II	Mild	• Independent, but in some areas functioning is not particularly effective. • Impairment levels compatible with some (but not all) useful functioning. • Examples: ▫ May have difficulty relating to certain groups. ▫ May become irritable. ▫ Rarely goes to social events and may need prompting to do so. Tendency to social isolation. ▫ Previously established relationships may be severely strained (for example, with periods of separation or domestic violence).	10–35%
III	Moderate	• Independent, but not effective in all or many areas of function. • Impairment levels significantly impede useful functioning. • Examples: ▫ Loathe to leave home and will usually only go out with a support person. ▫ Socially isolated. ▫ Avoids actively engaging with society at large. ▫ May tolerate the company of a family member or close friend but go to a different room when others come to visit family or flatmates. ▫ Struggles to maintain social norms.	36–60%
IV	Marked	• Is only able to live independently with some sort of regular or intermittent support. • Impairment levels significantly impede useful function. • Examples: ▫ Violates social norms. ▫ May never leave place of residence. ▫ Unable to be socially responsible (for example, take care of others).	61–79%
V	Extreme	• Complete dependence on another person at all times. • Analogous with institutional living (for example, permanent patient in a psychiatric hospital).	80–100%

Rate the functional categories (concentration, persistence, and pace)

Class	Impairment	Comments	Rating
General comments: • This refers to the ability to plan, organise, and complete tasks. • Read AMA4 page 300 section 14.7 on evaluating psychiatric impairment.			
I	Nil / minimal	• Able to be effectively independent most of the time. • Any minor deficit of function could reasonably be attributed to normal variation within the general population. (For example, anxiety in certain situations, such as a job interview.) • Examples: ▫ Able to sustain focused attention long enough to permit timely completion of tasks in the home and workplace without supervision. ▫ Able to work full time. Duties and performance are consistent with the claimant's education and training.	0–9%
II	Mild	• Independent, but in some areas functioning is not particularly effective. • Impairment levels compatible with some (but not all) useful functioning. • Examples: ▫ Can undertake basic training. But may have difficulty concentrating on complicated instructions. ▫ Can focus intellectually on demanding tasks, but possibly only for a limited time. ▫ Usually employed, but may have erratic work history marked with periods of unemployment. ▫ May need some assistance with such things as decision making and finances.	10–35%
III	Moderate	• Independent, but not effective in all or many areas of function. • Unable to sustain employment. • Impairment levels significantly impede useful functioning. • Examples: ▫ Marked difficulty in completing tasks in a timely manner. ▫ Marked difficulty in following instructions.	36–60%
IV	Marked	• Is only able to live independently with some sort of regular or intermittent support. • Impairment levels significantly impede useful function. • Examples: ▫ Unable to perform tasks without intensive support and supervision. ▫ Concentration deficits obvious even during brief conversation. ▫ Can only read a few lines before losing concentration.	61–79%
V	Extreme	• Complete dependence on another person at all times. • Analogous with institutional living (for example, permanent patient in a psychiatric hospital). • Requires constant supervision and assistance. • All useful functioning precluded. • Can't attend to conversation or any productive task at all. • Examples: ▫ Acute confusional state. ▫ Complete loss of short term memory. ▫ Intractable psychotic state. ▫ Intractable depression.	80–100%

Rate the functional categories (adaptation/decompensation)

Class	Impairment	Comments	Rating
General comments: • This deals with the claimant's reaction to stress. • Read AMA4 page 300 section 14.7 on evaluating psychiatric impairment.			
I	Nil / minimal	• Able to be effectively independent most of the time. • Any minor deficit of function could reasonably be attributed to normal variation within the general population. • Well able to adapt to the challenge of new stresses, or may experience minimal decompensation with stress. • Examples: ▫ Mood changes or anxiety around emotional triggers (like the anniversary of a loved one's death).	0–9%
II	Mild	• Mild decompensation with stress such that: ▫ Can still complete tasks at home and work; but ▫ Standard of function is impaired (for example, pace reduced), or may actively seek a less stressful environment.	10–35%
III	Moderate	• Decompensation with stress is such that claimant may not be able to meet usual commitments of home and work. • Averages no more than two episodes a year of decompensation (for example, depressive episodes) and loss of adaptive functioning requiring support (medication, psychiatric input, hospitalisation). • Examples: ▫ Doesn't attend work, or attendance is erratic. ▫ Becomes depressed. ▫ Seeks treatment from a counsellor or GP. ▫ Abuses drugs or alcohol as a reaction to stress.	36–60%
IV	Marked	• Decompensation with stress is such that claimant may not be able to meet usual commitments of home and work. • Averages three or more episodes a year of decompensation (for example, depressive episodes) and loss of adaptive functioning requiring support (medication, psychiatric input, hospitalisation). • Each episode lasts two or more weeks.	61–79%
V	Extreme	• Extreme impairment precluding all useful function. • Analogous with institutional living (for example, permanent patient in a psychiatric hospital). • Can't tolerate any change of routine or of environment. • Can't function, or decompensates, when schedules changes in an otherwise structured environment. • Examples: ▫ May have a psychotic episode if meal not served on time ▫ May have a panic attack if left without a companion.	80–100%

Rate the overall impairment

The figures taken from the above four categories are not added, averaged or combined. The figures are to assist the assessor, in conjunction with clinical judgement, to arrive at a whole-person impairment rating based on the claimant's current level of functioning, and expressed as a single percentage.

Guidelines:

- An EXTREME rating in one category implies that the individual is highly unlikely to perform satisfactorily in any of the categories.
- A MARKED rating in two categories implies that the individual is unlikely to be able to perform any complex task without support or assistance.
- A MODERATE rating in four categories should be considered to be moderate overall. (That is, they aren't additive.)

The final whole-person impairment rating is not expected to be:

- Less than the lowest of the figures selected to represent impairment in the four categories of function; or
- Higher than the highest of the figures.

Bear in mind the following summary when selecting a final whole person impairment:

Impairment	Rating	Comments
Nil / minimal	0–9%	• Effectively independent.
Mild	10–35%	• Independence not fully effective or sustainable in some areas of function.
Moderate	36–60%	• Independence not fully effective or sustainable in all areas of function.
Marked	61–79%	• Independent only with support.
Extreme	80–100%	• Unable to live independently.

Finally:

- Always justify the final whole-person impairment rating.
- The majority of cases require some apportionment for the impact of non-covered factors. For assistance with apportionment, see page 10.

Report format: Mental injury

Use the following format for your report. Each element must be present, and in the order specified.

Topic		Comments
Background	Assessor details	• Your name and contact details.
	Title of report	• Either: Lump sum report; or Independence allowance assessment report • Indicate in the title if the report is amended.
	Address to referring case manager	
	Appointment details	• Date, time, and duration of appointment. • Date assessment requested by ACC.
	Claimant details	• Name and DOB.
	Injuries	• List injuries for which ACC has requested assessment: Date Injury Claim number
	Documentation	• List documents received and reviewed: Date Source or author • Don't summarise the content of the document in this list.
History	• Brief history of abuse • Brief summary of treatment received (for example, counselling) • Current impact of the covered mental injury (as described by the claimant) • Current personal circumstances • Personal history • Medical history • Mental status examination	
Assessment	• Activities of daily living • Social functioning • Concentration, persistence, and pace • Adaptation/decompensation	
Impairment rating	• Report separately for the following, justifying the rating: Activities of daily living Social functioning Concentration, persistence, and pace Adaptation/decompensation	
Estimated WPI		
Apportionment	Make sure you justify this	
Final WPI		
Discussion	Comment on permanence[5] and stability[6]	
Conclusion	Final whole-person rating (for ALL conditions)	
	Signature	• Sign after proof reading.
	Attachments	• Note how many attachments are enclosed at the foot of the report.

Notes:

- Make sure you number the pages of the report.
- Don't use names of people, places, schools, etc. That is, avoid using unnecessary identifying data.

5. Permanent impairment means:
   "A loss, loss of use, or derangement of any body part, organ system, or organ function, that is well established and unlikely to change substantially in the next year, with or without further medical treatment."
6. Stability means:
   "Unlikely to improve in the next twelve months."

Pain

Not usually rateable

Pain is not separately rateable, except where specifically noted in AMA4. (In general, the AMA4 percentages for the various organ systems already make allowance for accompanying pain.)

AMA4 references

The following AMA4 references apply to pain generally:

Page 9 "Pain"
Page 13 paragraph 2
Page 152 section 4.5
Page 303 chapter 15

The following exceptions also apply:

Condition	Comments	AMA4 page
Causalgia	• Note the four cardinal signs and symptoms on AMA4 page 56.	56 "Causalgia and reflex sympathetic dystrophy" 89 section 3.21 140 "Sensory disturbances"
Cervical spine		105 examples 1-2
Chronic pain syndrome	• May be assessed for mental injury, but only if a psychiatrist has diagnosed chronic pain syndrome arising from a covered physical injury. • Only assessors with specific training in chapter 14 may do such assessments. • Cover will have been formally evaluated by a psychiatrist against the criteria provided in DSM IV.	Page 297 "Pain"
Peripheral nerve pain syndrome	Lower extremity	150 section 4.4a 151 table 20
	Upper extremity	46 "Sensory deficits and pain" 48 table 11 51 table 13 150 section 4.4a
Phantom limb pain Thalamic pain		140 "Sensory disturbances"
Trigeminal neuralgia		145 table 9

Peripheral nervous system

Note: The brain and cranial nerves are covered on page 17 of this document, and the spine on page 48.

Topic	Subtopic	Comments	AMA4 page
Brachial plexus		• Make sure you read the footnote to table 14.	52 L column 52 table 14 53 text 53 figure 47
Causalgia/RSD	General comments	• The four cardinal signs and symptoms of RSD are pain, swelling, stiffness, and discoloration. • Also refer to "Individual peripheral nerves" (below). • Causalgia/RSD is a combination of: Motor impairment Sensory impairment; and ROM	
Dermatomes	Lower extremity		93 figure 59
	Upper extremity		52 figure 46
Digits and hands		• Refer to: "Individual peripheral nerves" (below); and "Sensory loss (digits and hand)" on page 52 of this document	
Entrapment neuropathy		• Don't use AMA4 page 57 table 16. Use table 15 (which is more specific), or rate as individual peripheral nerve (see "Individual peripheral nerves" below). • Make sure you read the footnotes.	54 table 15 48 table 11 49 table 12
Head and neck		• Arising from C1 and C2. • If not arising from C1 or C2, use the following entries under "Brain and cranial nerves" in this document: Physically examine the claimant (page 20) AMA4 references (page 21)	152 table 23
Inguinal, perineal region			152 table 24
Individual peripheral nerves	Lower extremity	• Make sure you read the procedures under tables 20-21. • In step 6 of the procedure under table 20, "whole person" should read "lower extremity".	88 section 3.2k 89 table 68 93 figures 59-60 130 table 83 151 table 20-21
	Upper extremity	• Make sure you read all footnotes under the tables. • Also note the following: ▫ *Entrapment neuropathy* Don't use AMA4 page 57 table 16. Table 15 is more specific. ▫ *Palm sensation* See AMA4 page 22 column 1, one paragraph from the bottom. ▫ *Sensory loss proximal to MCP joints* Rate as for peripheral nerve. • Also see the following entries in this document: Sensory loss (digits and hand), page 52 Strength of grip, page 52	46 section 3.1k 47 table 10 48 table 11 49 table 12 50 figure 45 51 table 13 52 table 14 52 figure 46 53 figure 47 54 table 15 55 figure 48
Thoracic nerves			152 section 4.4e

Reproductive system

Topic	Subtopic	Comments	AMA4 page
General comments: ♦ AMA4 page 256 section 11.5 describes how to grade relative to age.			
Gonadal function	Male		274 section 12.7
Mammary glands	Female/male		275 section 12.8
Reproductive organs	Female		259 section 11.6
	Male	♦ Note the adjustment for age in the first paragraph of section 11.5.	256 section 11.5

Respiratory system

Topic	Subtopic	Comments	AMA4 page
Respiratory	General	• The main reference is table 8.	162 table 8
	Lung cancer	• Treat as severe in table 8. • Use table 11 for grading within the class. • Respiratory function tests aren't necessary.	162 table 8 164 table 10 165 table 11

Skin

Topic	Subtopic	Comments	AMA4 page
Skin covering	Lower extremity	• See page 31 of this document ("Skin loss").	
Skin impairment (including scars)		• Consider that when the impairment resulting from a burn or scar is based on peripheral nerve dysfunction or loss of ROM, it may be evaluated according to neuromusculo-skeletal criteria. • For scars on the face, see page 25 of this document ("Facial structure").	277 chapter 13 280 table 2

Spine

Introduction to assessment

This covers the spine. The brain and cranial nerves are covered on page 17 of this document, and the peripheral nervous system on page 43.

Spinal injuries generally fall into the following categories:

- Injuries affecting structural integrity (vertebral fractures and dislocations, disc injuries, etc).
- Nerve root injury (most commonly a compression syndrome).
- Spinal cord injury.

Assessment methods

The following methods are available when assessing spinal injury:

Method	Comments
DRE (diagnosis-related estimate)	• This is also called "the injury model". • Use this model, as recommended in AMA4. • Described further on page 49 of this document.
ROM (range of motion)	• Not used by ACC.
Spinal cord	• Additional impairment of the respiratory system or sexual function should be rated by the spinal cord section, and the rating combined with the DRE rating. • See AMA4 page 147 section 4.3.
Peripheral nervous system	• See page 43 of this document.

Assessment process (overview)

The basic assessment process is:

- Go to AMA4 page 108 table 70 and determine the appropriate categories for the claimant's condition.
- Then, if more than one category is given, use pages 101-107 to choose between them.

Important: Don't go to AMA4 until you've read the remainder of this section.

DRE method (spinal or back injury)

Topic	Subtopic	Comments
Examination		• Include ROM, tone, power, coordination, reflexes, sensation, plantars, circumferential measurements of appropriate limbs, and muscle guarding. • In your report, include comments on gait and the use of assistive aids (if used).
Analysis		• See AMA4 page 100 section 3.3e paragraph 2 for "general approach and directions". • This refers you to AMA4 page 108 table 70, which describes all possible spinal presentations you're likely to encounter. • If more than one category is given, use pages 101-107 to choose between them.
All regions	Imaging	• Imaging studies may support a diagnosis, but in themselves don't make the diagnosis (unless the injury is a fracture). • Each of the eight DRE categories has two sections ("description and verification" and "structural inclusion"). Only the criteria of one section needs to be satisfied to be placed in that category.
	DRE spinal category I	• Read as: "The patient has no significant clinical findings, no muscle guarding, no documentable neurologic impairment, and no indication of impairment related to injury." • Delete the sections on "History of guarding" and "LOMSI".
	DRE spinal category II	• Read as: "The patient's history and findings are compatible with an injury. Findings may include muscle guarding, dysmetria or non-verifiable radicular complaints. There is no objective sign of radiculopathy and no loss of structural integrity." • Delete the sections on "History of guarding" and "LOMSI".
	LOMSI	• Delete this as a differentiator.
Spinal regions Cervicothoracic C1–T2 Thoracolumbar T3–L2 Lumbosacral L3–S2	General comments	• Read AMA4 pages 94-111. • Delete AMA4 page 100 paragraph 3, referring to claimants with a history of spinal surgery. Assess claimants as they present. • Note: Page 113 table 75 is NOT part of the DRE assessment tool. • Should a single injury straddle categories, use the category with the higher impairment.
	Coccyx and remainder of sacrum	• Refer to the pelvis material on AMA4 page 85 table 64 and page 131 section 3.4.
	Radiculopathy	• Means any disease of a nerve root. • May exist without signs or symptoms, but AMA4 requires significant signs to be present. • AMA4 gives two examples (loss of relevant reflexes or specific atrophy) on page 102 under category III. These aren't exhaustive, but reinforce that an objectively verifiable clinical sign is required.
	Cauda equina	• Cauda equina syndrome is manifested by bowel or bladder dysfunction, saddle anaesthesia, and variable loss or motor and sensory function in the lower extremities. Individuals with cauda equina syndrome usually have loss of sphincter tone on rectal examination and diminished or absent bladder, bowel, and lower limb reflexes. • Cauda equina-like syndrome is as above, but without bowel or bladder dysfunction.
Range finding		• Don't range-find within categories.
Combining		• See the footnotes to AMA4 pages 110-111 table 73-74 on combining percentages from different categories when long tract signs are present.

Upper extremity

Topic	Subtopic	Comments	AMA4 page
General comments: • Record your results on a copy of the "Upper Extremity Evaluation Record" found in AMA4, pages 16 and 17. If both left and right are being evaluated, always complete a separate sheet for each side. • For relative value of joint to the upper extremity, see AMA4 page 58 table 18. • To convert digit to hand, hand to upper extremity, and upper extremity to whole person, see page 18-20 tables 1-3. • AMA4 pages 63-64 "Other musculoskeletal system defects" allows the percentage to be increased if the severity of the clinical findings doesn't correspond with the extent of the musculoskeletal defect. Use this only rarely, and don't exceed 3%. • If a defect isn't listed below, see AMA4 pages 63-64 "Other musculoskeletal system defects".			
Amputation	General comments	• An amputation rating may be combined with ROM rating of the associated joint.	
	All joints		18 figure 2
	Finger	• Also read this reference.	30 figure 17
	Thumb	• Also read this reference.	24 figure 7
Ankylosis / arthrodesis		• See "ROM, ankylosis, arthrodesis" below.	
Arthroplasty	All joints	• Combine with ROM rating. • Note that a rating for excision of distal clavicle is included in table 27. • Acromioplasty is not analogous to excision of distal clavicle.	61-62 "Arthroplasty" 61 table 27
Crepitation	All joints	• Add it to the joint ROM impairment. • Make sure you read the footnotes	58 "Joint crepitation with motion" 59 table 19
Deviation	Digit		59 "Digit lateral deviation" 59 table 21
	Elbow Wrist		60 "Wrist and ulnar joint radial and ulnar deviations" 60 table 25
Dislocation / subluxation	All joints	• Rateable only if ROM is normal. • Table 23 refers to "persistent". Also use it for "recurrent". • Multiply by the joint value given in table 18.	60 "Persistent joint subluxation and dislocation" 60 table 23 58 table 18
Grip and pinch strength		• Don't use grip and pinch strength as a method of impairment rating (as suggested on AMA4 pages 64-65). Strength evaluations are unreliable indicators of impairment. • To assess motor strength of digits and hand, consider using an equivalent peripheral nerve (see "Peripheral nervous system" below).	
Instability	All joints	• Don't use for carpal instability.	60 "Joint instability" 60 table 24
	Carpal		61 "Carpal instability" 61 table 26
Musculotendinous	Digit		63 "Musculotendinous impairments" 63 tables 28-30
Neuroma	Digit		66-67 example 1

Topic	Subtopic	Comments	AMA4 page
General comments: • Record your results on a copy of the "Upper Extremity Evaluation Record" found in AMA4, pages 16 and 17. If both left and right are being evaluated, always complete a separate sheet for each side. • For relative value of joint to the upper extremity, see AMA4 page 58 table 18. • To convert digit to hand, hand to upper extremity, and upper extremity to whole person, see page 18-20 tables 1-3. • AMA4 pages 63-64 "Other musculoskeletal system defects" allows the percentage to be increased if the severity of the clinical findings doesn't correspond with the extent of the musculoskeletal defect. Use this only rarely, and don't exceed 3%. • If a defect isn't listed below, see AMA4 pages 63-64 "Other musculoskeletal system defects".			
Peripheral nervous system		• Make sure you read all footnotes under the tables. • Also note the following: ▫ *Entrapment neuropathy* Don't use AMA4 page 57 table 16. Table 15 is more specific. ▫ *Palm sensation* See AMA4 page 22 column 1, one paragraph from the bottom. ▫ *Sensory loss proximal to MCP joints* Rate as for peripheral nerve. • Also see the following entries in this document: Sensory loss (digits and hand), page 52 Strength of grip, page 52	46 section 3.1k 47 table 10 48 table 11 49 table 12 50 figure 45 51 table 13 52 table 14 52 figure 46 53 figure 47 54 table 15 55 figure 48
Peripheral vascular disease		• Use the table in AMA4's cardiovascular chapter.	197 table 13
ROM, ankylosis, arthrodesis	General comments	• Measure active ROM (not passive). • Use a goniometer. • Read the three paragraphs at the start of page 62. • ROM is subject to variation because of pain during motion at different times of examination, and possible lack of cooperation. If inconsistency exists, then don't use it. Supporting references in AMA4 are: Page 9, paragraph 3 Page 8, 2.2 paragraph 3 Page 77, 3.2e Page 112, General measurement principles • Select a rating for each movement and combine at the upper-extremity level before conversion to whole person. • Pay close attention to the instructions on adding and combining in AMA4 pages 16-17 figure 1.	
	Ankylosis / arthrodesis	• After arthrodesis, rate only according to the guidelines for ankylosis impairment.	62 paragraph 2
	Elbow		40 figure 32 41 figure 35
	Finger	• ROM flexion and extension values within any single joint of the thumb or fingers are added. • ROM joint values within any single digit are added for the thumb, and combined for the fingers.	32 figure 19 33 figure 21 34 figure 23
	Shoulder		43 figure 38 44 figure 41 45 figure 44
	Thumb		28-29 tables 5-7 26 figure 10 27 figure 13
	Wrist		36 figure 26 38 figure 29

Topic	Subtopic	Comments	AMA4 page
General comments: • Record your results on a copy of the "Upper Extremity Evaluation Record" found in AMA4, pages 16 and 17. If both left and right are being evaluated, always complete a separate sheet for each side. • For relative value of joint to the upper extremity, see AMA4 page 58 table 18. • To convert digit to hand, hand to upper extremity, and upper extremity to whole person, see page 18-20 tables 1-3. • AMA4 pages 63-64 "Other musculoskeletal system defects" allows the percentage to be increased if the severity of the clinical findings doesn't correspond with the extent of the musculoskeletal defect. Use this only rarely, and don't exceed 3%. • If a defect isn't listed below, see AMA4 pages 63-64 "Other musculoskeletal system defects".			
Rotational deformity	Digit		59-60 "Digital rotational deformity" 59 table 22
Rupture of biceps muscle		• Rate ROM as per shoulder and/or elbow. • Rate power as per an analogous peripheral nerve (for example, musculocutaneous).	54 table 15 47 table 10 55 figure 48
Sensory loss (digits and hand)	General comments	• For sensory loss proximal to hand, see the separate entry for "Peripheral nervous system" above.	20-22 section 3.1c
	Finger	• Note that tables 8-9 are the same as page 25 table 4.	30-31 "Sensory loss of fingers" including tables 8-9 and figure 17
	Palm	• For palm sensation, see the text on AMA4 page 22 column 1 (one paragraph from the bottom).	
	Thumb		25 table 4 24 "Sensory loss of thumb" including figure 7
Strength of grip		• Don't use grip and pinch strength as a method of impairment rating (as suggested on AMA4 pages 64-65). Strength evaluations are unreliable indicators of impairment. • To assess motor strength of digits and hand, consider using an equivalent peripheral nerve (see "Peripheral nervous system" below).	
Synovial hypertrophy	All joints	• Rateable only if ROM is normal. • Make sure you read the footnotes.	59 "Joint swelling due to synovial hypertrophy" 59 table 20
Tenosynovitis (trigger finger)	Digit		63 table 29
Tumour		• Malignant, with resection and surgical reconstruction.	62 paragraph 3

Urinary tract

Topic	Subtopic	Comments	AMA4 page
Lower urinary tract			254 section 11.3 255 section 11.4
Upper urinary tract			249 section 11.1 251 table 1 253 section 11.2 253 table 2

Visual system

Introduction

Test with glasses or contact lenses if usually worn (see AMA4 page 9 "Using prostheses in evaluations").

The following information needs to be obtained:

Visual acuity near
Visual acuity distant
Visual fields
Diplopia
Other ocular abnormalities
Cosmetic deformities

You may measure these yourself, or get a report from an optometrist. It isn't usually necessary to get a report from an ophthalmologist.

A report from an optometrist is recommended if there are visual field abnormalities.

Each topic is described below. When you have the information for each eye, enter the results into the worksheet provided on page 71 of this document.

Visual acuity near

In New Zealand, this is typically measured using the N notation (see page 70 of this document). Convert N notation into Snellen inch equivalents as follows:

N notation	Snellen inch equivalents
N5	14/18
N8	14/24
N10	14/28 (newsprint)
N12	14/35
N18	14/45
N24	14/70
N36	14/88
N48	14/140

Visual acuity distant

Test using the usual Snellen chart and convert to English feet using AMA4 page 211 table 2.

When you have readings for both eyes for both "visual acuity near" and "visual acuity distant", use AMA4 page 212 table 3 to get a rating for loss of central vision for each eye.

The table gives two possible figures for each eye. See the footnote, which indicates which figure to use.

Visual fields

These are typically tested as monocular, but may be tested as binocular. However, monocular testing is recommended.

Use the eight principal meridians described on AMA4 page 212 table 4 and page 213 figure 1. This approach should be used whoever does the testing, and however the testing is done (confrontation or specialist equipment).

Typically, an optometrist will provide a visual field test as per AMA4 page 216 field 3. Use the results to establish the visual field loss, as follows:

- Draw a line around any figure greater than 10dB. (Use the top figure, not the one in brackets.)
- Note that the field in this diagram only extends to 30º degrees. This is acceptable if you're confident the claimant has no vision beyond this.
- If the claimant has vision beyond 30º, a visual field examination going out to the extent of the field (for example 60ºor 80º) is needed.

Example 3 on page 216 illustrates the method:

- The visual field of the temporal meridian extends right to the edge of the 30º field, so this is listed as 30º.
- The "down temporal" meridian only extends about 1/6th of the way to the possible 30º border, so is given a 5º rating (5º being 1/6th of 30º).
- The "direct down" extends about 1/10th of the way to the possible 30º maximum, so is given a 3º rating (3º being 1/10th of 30º).
- And so on around the eight meridians.

Once you have a figure for each of the meridians:

- Add them and divide by 5. This gives you the percentage of visual field RETAINED.
- Then subtract this figure from 100 to get percentage of visual field LOST, which is what you want for the assessment.

Note: AMA4 page 214 table 5 does these last two calculations for you.

Diplopia

Repeat example 3 (AMA4 page 216) for diplopia. Also read the text on AMA4 page 217 section 8.3, including figure 3.

Cosmetic visual deformities

Permanent deformities of the orbit, such as scars or cosmetic defects, that don't alter ocular function, may also be considered to be factors causing whole person impairments.

Other ocular abnormalities

If an ocular or adnexal disturbance or deformity interferes with visual function and isn't reflected in diminished visual acuity, decreased visual fields, or ocular motility with diplopia, document the significance of the disturbance or deformity.

Abnormalities that might result in such impairments include:

Abnormalities resulting in such symptoms as:
- Epiphora
- Photophobia
- Metamorphopsia

Corneal or lens opacities
Media opacities

Combining: Lower extremity

Distal tibial fracture (left) extending into joint. Severely comminuted with some muscle and bone loss. ORIF. Healed with 12º of persisting malalignment at the fracture site and left leg shortening. Uses either a cane or crutch routinely.

Examination revealed patient walking with a limp and using a cane as a mobility aid. Knee range of motion was flexion 100º and extension full, with no varus or valgus malalignment. Knee ligaments intact.

Ankle range of motion was plantarflexion, dorsiflexion, inversion and eversion all 10º. Ankle ligaments intact.

Atrophy thigh nil, calf 2cm atrophy evident since injury.

Leg lengths as measured from the ASIS to lateral malleoli were 86cm on the left and 88cm on the right. This discrepancy was confirmed when tested from lateral tibial condyle and considered extra to the angulation.

Traumatic and surgical scars evident and well healed. Skin otherwise normal to observation.

There was active movement to some (not full) resistance when testing both flexion and extension. Leg was neurovascularly intact.

Bilateral weight bearing x-rays showed degenerative change of the left ankle with joint cartilage decreased to 2mm. Joint space of the knee maintained.

Potential impairment ratings

DRE	P 85, T 64	Malalignment 20% LE
ROM	P 78, T 41,42	The knee flexion of 100º attracts: Impairment rating of 10% LE Ankle plantarflexion 10º = 15%LE Ankle dorsiflexion 10º = 7% LE Inversion 10º = 2% LE Eversion 10º = 2% LE Ankle ratings combine to 25%LE Combine knee 10% LE and ankle 25% LE = 33% LE
LLD	p 75, T 35	2cm = 5% LE
Atrophy	p 77, T 37	Calf 2cm = 8% LE
Gait	P 76, T 36	Routine use of cane or crutch = 20% WP
Arthritis	P 83, T 62	Arthritis based on cartilage interval 2mm = 15% LE
Muscle strength	P 77, T 38,39	Grade 4 weakness of both flexion and extension of ankle = 17% combined with 12% = 27% LE
Amputation		Not applicable
Skin loss		Not applicable
Peripheral nerve injury		Not applicable
Vascular		Not applicable

Possible calculation combinations

DRE, OA, LLD	• DRE 20% LE may be combined with an arthritis rating as the fracture involved the ankle joint. • Only one arthritis rating may be used: Either ROM Or cartilage interval • Taking the highest which is ROM 25% = 25 combined with 20 and 5 (LLD) = 43% LE, which converts to 17% WP
Gait	• Use on own = 20% WP
Atrophy, LLD	• Atrophy 8% LE combined with LLD 5% LE = 13% LE, which converts to 5% WP
Muscle strength, LLD	• Muscle strength 27% LE combined with LLD 5% = 31% LE which converts to 12% WP

Decision

Selecting the highest = 20% WPI

Comment

There are multiple impairments in this example. The assessor considered that allowable combinations of impairment don't adequately reflect total impairment, and that the case is best assessed by using "gait".

Note also that the entire impairment is due to the covered injury, and apportionment isn't therefore applicable.

Range finding: Lower extremity

Patient suffered a DVT after fracturing tibia one year ago. The tibia has healed well but, patient complains now of a persistently swollen leg, even in the mornings, despite use of compression stockings. Has a standing tolerance of one hour and walking tolerance of one mile. Denies rest pain. Is able to perform most activities of daily living.

On examination, pitting oedema of 2cm of the lower leg as far as the knee. Otherwise normal to examination.

Impairment rating: AMA4 page 89 table 69.

Patient is a little worse than class I as oedema is persistent and there is minimal restriction of ADL. Otherwise criteria of class I are satisfied.

As regards class II, does not meet the first criterion, but does meet the second in that he has persistent oedema of moderate degree not fully controlled by elastic support. He does not meet the third criterion of class II which describes signs of vascular insufficiency.

As regards class III, presentation is not severe enough to satisfy any criteria.

Rating therefore falls into class II 10-39%.

Having established the class, the assessor now determines the rating within the range given.

Because patient is not approaching any criteria of class III, does not attract an impairment rating at the high end of the range.

Is just a little worse than class I and meets one criterion of class II. Therefore attracts an impairment rating at the lower end of class II 15% WPI.

Comment

Note that the criteria in class II are separated by "or". Therefore, if the patient met all three criteria, they would be at the higher end of class II.

It would also be helpful to quote an example from AMA4, adding further support to the selected rating.

Range finding: Skin (example 1)

Suffered thermal burns to dorsum of both hands and feet. Fingers and toes spared. Underlying tendons spared. Dorsum of both hands and feet skin-grafted.

As regards the patient's hands, complains that the grafts are stiff, crack easily and the grafted skin lacks sensation which predisposes to minor trauma. The skin is irritated by sunlight and also by many chemicals (for example soap). Patient always wears sunblock outdoors. Frequently wears gloves to avoid knocking skin. While digital dexterity remains intact, the patient has difficulty grasping as the skin on the back of his hand tends to crack and this makes use of instruments such as comb, toothbrush, pen difficult.

As regards feet, the patient has a full range of movement and no problem with mobility but cannot tolerate leather boots or shoes on the grafted skin as it rapidly breaks down with minor trauma. Is therefore restricted from engaging in any activities which require stout shoes. Wears soft fabric shoes.

Uses a variety of moisturisers and emollients frequently on an "as needed" basis. Lives quite independently.

Examination revealed well healed but stiff and atrophic grafts on both hands and feet. There was evidence of multiple minor trauma. Full range of movement of the feet but hand grip limited bilaterally due to inflexibility of grafted skin. Individually the digits had a full range of movement.

Impairment rating: AMA4 page 280 table 2.

The assessor selects the appropriate class within table 2, done by examining the criteria of the various classes as follows.

In class I, patient has signs and symptoms of skin disorder present, there is limitation of many, not a few, activities of daily living, and intermittent treatment is required. Therefore, satisfies two of the three criteria of class I.

In class II, has signs and symptoms of skin disorder present, there is limitation of many, not some, activities of daily living, and intermittent treatment is required. Therefore, satisfies two of the three criteria of class II.

In class III, has signs and symptoms of skin disorder present, there is limitation of many activities of daily living and intermittent treatment is required. Therefore, satisfies all the criteria of class III.

In class IV, signs and symptoms of skin disorder are constantly present, there is limitation of many activities of daily living but not to the extent of being confined to the home to any degree at all, and intermittent treatment is required. Therefore, also satisfies all three criteria of class IV. *(Note: The second criterion doesn't require that there MUST be confinement to the home, only that there MAY be.)*

In class V, signs and symptoms of skin disorder are present constantly, there is limitation of many, not most, activities of daily living, there is no confinement to the home and intermittent treatment is required. Therefore, meets two of the three criteria of class V.

In summary, patient is in either class III or class IV (the two classes in which they meet all the criteria). Given that the patient does not have, and is not likely to have, a need for confinement, it is more appropriate to use class III.

Having selected the class, the assessor then selects the appropriate rating from within that class. This is done by reference to the classes above and below the selected class.

Class III = 25-54%

Within class III, the patient falls midway between classes II and IV in that he has restriction of many, not some, activities of daily living, but not to the extent that he is approaching a need for confinement.

Final whole person impairment = 40%

Range finding: Skin (example 2)

The patient suffered transient hand dermatitis secondary to exposure to chemicals at their place of work. Went on to develop depigmentation of the distal arms bilaterally, unresponsive to a year of PUVA. At work, the patient was required to spend some time outdoors which resulted in frequent sunburn of the depigmented skin. Needs frequent use of sunblock. Continues to work fulltime and to engage in a full range of activities of daily living.

Impairment rating: AMA4 page 280 table 2.

The assessor selects an appropriate class.

Satisfies all criteria of class I, and two of the three criteria in class II. As all criteria in any one class must be met, the patient attracts a class I rating, 0-9% WPI.

The assessor now selects a rating within class I.

Has signs and symptoms of skin disorder and requires intermittent treatment but he has no limitation of activities of daily living.

Based on each of the three criterion equating to 3% WPI[7], the patient attracts rating from two of the three. That is, 6%WPI.

7. Given that the maximum in this class is 9%WPI.

Range finding: Traumatic brain injury (using recommended formatting)

ASSESSORS NAME AND CONTACT DETAILS

INDEPENDENCE ALLOWANCE ASSESSMENT REPORT

Date of Assessment:

Time: Duration:

To: Case manager, ACC, Auckland

1.	**Claimant Name:**
	Date of birth:
	Injury: 29/3/95 – traumatic brain injury
	Claim Number: A1234567/001

2. Documentation received

3/4/00	Auckland Hospital discharge summary
26/4/00, 8/9/00	Rehab Plus interdisciplinary reports
8/6/00	Audiogram
12/2/00	Report from ENT specialist (page 1 only)
18/12/00	ARC54f

3. History

On 29 March 1995 Mr L fell 5 metres from a roof. He suffered a basal skull fracture and associated subdural haemorrhage. He was treated conservatively and discharged from Rehab Plus 5 months after the accident.

He complains of suffering ongoing impairment of memory, impairment of balance, and hearing loss, right worse than left. Mr L was accompanied to the interview by his wife, who provided useful collateral information.

4. Current circumstances

Mr L is now aged 65. He had already retired at the time of the accident. He lives with his wife in rental accommodation. They have 2 adult children whom they keep in touch with. Mr L occupies his day gardening (now limited by balance problems), making model planes and walking.

5. Personal history

Mr L grew up as the eldest of 2 boys. He reports his developmental milestones were normal. At school he considers he was academically average. His parents were good to him. Mr L worked as a farm labourer until the age of 18 when he moved into the city. He subsequently worked in house painting, drain laying and lawn mowing (without ear protection).

Mr L married at the age of 24 to his present wife.

6. Mental status examination

Mr L presented well groomed. His behaviour was cooperative and appropriate. Attitude was frank and friendly. Talk and thought both normal. Affect appropriately reactive. Mood generally good, but Mr L acknowledged decreased confidence, especially in unfamiliar situations or environments. Mr L said he gets stressed very easily now, and Mrs L said, "He's not the happy disposition he was before. The slightest thing makes him irritable." Mr L said, "I get snappy"; "Everything is so hard"; "The slightest little thing drives me crazy".

As regards memory, Mr L said he is very frustrated by memory loss since the accident. He forgets a lot of what he has read. He forgets names. He can watch a television serial and generally remember the story-line, but not remember characters' names. He can watch a movie but immediately afterwards will not recall much of it and months later with have no recall at all.

7. Activities of daily living

Mr L is independent with all basic self-cares. He has no problems with communication. He has never driven. He is able to use public transport if the route is familiar. Both he and his wife agreed that he wouldn't cope with an unfamiliar public transport route, though he would have before the accident.

Although Mr L has on rare occasion left the toaster and oven turned on, both he and his wife were adamant that Mr L was quite safe if left on his own.

Mr L reports a decreased libido since the head injury. His sleep pattern has also altered since the accident and Mr L now wakes 3 – 4 times a night and tends to ruminate. Mr L said he is able to shop independently. He was specifically asked about handling money and said he was confident he could calculate the correct change. However, on formal testing he was unable to perform serial seven calculations at all, and in addition when I asked him, "If you wished to purchase an item priced at $1.55 and gave the shop keeper a $2 coin, how much change would you expect?" he was completely nonplussed and just shrugged, unable to even attempt an answer. Both he and his wife said he could calculate prior to the accident.

8. Social functioning

Mr L maintains socially appropriate behaviour. He gets on with everybody and his wife reported that since the head injury he is a little less introverted if anything. They have a circle of friends whom they meet with frequently. He does not belong to any groups. Both agreed that Mr L was cooperative and considerate. Both agreed that Mr L is socially responsible and could be left to look after another person. Mr L agreed that he had a tendency to irritability, especially directed towards his wife, but it can be anybody. Mr L said that he had problems conversing in groups. It was not clear whether this was secondary to his hearing loss or secondary to the traumatic brain injury. He acknowledged that he was intolerant of noise since the head injury and that this may influence his participation in certain social events. He is able to negotiate and compromise.

9. Cognition

Mr L will complete tasks but gets very anxious before starting. He can plan and organise, but this is associated with great anxiety. Both he and his wife agreed that Mr L got very anxious today in anticipation of the interview with me. Mr L is poor at decision making now according to his wife. He is all right with little decisions but finds large decisions stressful. Although Mrs L has always handled the household finances, (this has been an agreed arrangement between them), Mr L, with his inability since the head injury to calculate, would now not be able to handle the finances. Folstein's 24/30. Complete inability to calculate. Spelled WORLD backwards with 3 errors. Complete absence of short term recall.

10. Other

Fatigue: extra sleep required most days.

Seizures: nil.

Headaches: nil.

Physical suffers hearing loss and dysequilibrium, otherwise nil physical sequelae reported.

Examination of peripheral nervous system including tone power coordination, reflexes, sensation and plantar responses of limbs normal.

Cranial nerves normal apart from hearing loss bilaterally. Findings of audiogram are detailed in the impairment rating. Mr L said he suffers tinnitus all the time and describes it as a "constant hiss". In relation to this he said, "It would drive you up the wall but I've sort of go used to it".

Dysequilibrium: Mr L struggles to maintain his balance all the time, whether on flat surface, inclines or stairs. He mobilises safely without aids, but if he bends forward feels sick. He tries not to allow this to restrict his activities and strives to carry on as pre-accident. However, he acknowledges gardening is difficult and he has on occasion fallen over on bending forward. He said he would stand on a chair to change a light bulb, but to do this would require great effort and he would really have to push himself. He said he would go up a ladder a couple of metres but no further. This is in contrast to pre-accident when he would have climbed higher, but now, despite trying to push himself to overcome his impairment, he does avoid what he perceives to be hazardous surroundings.

Scars: i) right face 2 cm linear vertical scar anterior to the right ear.

ii) scar on the right shoulder.

iii) 2 scars on the right lower leg, 1 anterior, 1 medially.

All scars are well healed, do not impact on activities of daily living and do not require ongoing treatment.

11. Traumatic brain injury impairment rating

Category I, consciousness and awareness.

Nil impairment. 0% whole person impairment

Category II, aphasia and communication.

Nil impairment. 0% whole person impairment

Category III, mental status and integrative functioning

Table 2, page 142. Poor memory. Poor decision making. Complete inability to calculate such that he is reliant on his wife for managing finances. Class 2, 15 – 29%. Mr L is not approaching the next highest category which requires institutional confinement, therefore he is placed towards the lower end of this range. 20% whole person impairment

Category IV, emotional and behavioural.

Tendency to irritability. Minimal impact on social and interpersonal function. 5% whole person impairment

Category V, preoccupation/obsession.

Nil impairment. 0% whole person impairment

Category VI, major motor or sensory abnormality.

Hearing loss.
Hearing level dB

FreqHz	R ear	L ear
500	25	50
1000	30	60
2000	30	80
3000	40	80
DSHL	125	270

Impairment rating: Table 2, page 226 Hearing loss 18.4% hearing system
Table 3 page 228, Hearing loss = 6% whole person
Text page 224, Tinnitus = 5%

Adding 6% and 5% = 11% whole person impairment.

Balance. Table 11, page 146. Minimal impairment of equilibrium but this impacts on all activities of daily living, for example walking, bending, gardening.
15% whole person impairment

Category VII, movement disorder.

Nil impairment. 0% whole person impairment

Category VIII, episodic neurological disorder.

Nil impairment. 0% whole person impairment

Category IX, sleep and arousal.

Mr L suffers disturbed nocturnal sleep pattern and daily fatigue to the extent he requires an extra sleep during the day.
5% whole person impairment

Impairment rating = the highest of the first 5 categories combined with the remaining 4 categories: 20% combined with 15%, 11% and 5% = 42% whole person impairment.

I gained the impression that Mr L strives to overcome the impairment from his injury and has a tendency to minimise impairment, however I have endeavoured to fairly reflect this when selecting impairment ratings.

Apart from referral to an ENT specialist Mr L wondered if there was anything else that ACC could offer him. He could possibly referred for assistance with managing his memory loss, his irritability, and his sleep pattern.

Final Whole Person Impairment 42%

Apportionment

There is no indication for apportionment.

Disclaimer

The impairment rating is consistent with and justified in accordance with the ACC Instructions Regarding Content and Format of an Impairment Assessment Report, the guidance provided during the ACC Independence Allowance Assessor Training Programme, and by the appropriate tables, figures, charts, and text of “The ACC User Handbook to AMA4” and “The 4th Edition of the AMA Guides to the Evaluation of Permanent Impairment”.

Worksheets

Worksheets for use with this user handbook follow.

Important: File with assessor's report

Lower extremity combining worksheet

For independence allowance and lump sums

Claimant name	**ACC claim number**	**Date**
Assessor name	**Assessor signature**	

Instructions

1. For each condition:
   - Check the AMA4 references listed in the "Results" table below.
   - Enter the impairment percentage in the "%" column, indicating whether lower extremity or whole person. (Examples: 45LE, 30WP)
2. Use the "Allowable-combinations matrix" below to determine which combinations to consider.
3. For each combination you decide to calculate:
   - Copy the percentages for the conditions you're including to one of the "Option" columns.
   - Combine them and enter the result in the "Result of combining" box at the bottom of that column.
4. Then convert all LE results to WP, entering the results in the "Percent whole person" boxes.
5. Finally, enter the selected WP result into the "Final whole person" box.

Results

Condition	AMA4 page	%	Option 1	Option 2	Option 3
Amputation	83 table 63				
Arthritis (DJD)	83 table 62				
CRPS / causalgia / RSD	151 tables 20-21				
DRE (diagnosis-related estimate)	85-86 table 64				
Gait derangement	76 table 36				
LLD (limb length discrepancy)	75 table 35				
Muscle atrophy	77 table 37				
Muscle strength	77 table 39				
PNS (peripheral nerve syndrome)	89 table 68				
ROM / ankylosis	78-82 tables 40-61				
Skin loss	88 table 67				
Vascular	89 table 69				
		Result of combining			
		Percent whole person			
		Final whole person			

Allowable-combinations matrix
(don't use other combinations)

	Amputation	Arthritis (DJD)	CRPS	DRE	Gait	LLD	Muscle atrophy	Muscle strength	PNS	ROM / ankylosis	Skin loss	Vascular
Amputation	…	✓	✓	✓					✓	✓	✓	✓
Arthritis (DJD)	✓	…	✓	*		✓			✓	*	✓	✓
CRPS / causalgia / RSD	✓	✓	…	✓		✓		*	*	*	✓	
DRE	✓	*	✓	…		✓			✓	*	✓	✓
Gait derangement					…							
LLD		✓	✓	✓		…	✓	✓	✓	✓	✓	✓
Muscle atrophy						✓	…				✓	✓
Muscle strength			*			✓		…			✓	✓
PNS (peripheral nerve syndrome)	✓	✓	*	✓		✓			…	✓	✓	✓
ROM / ankylosis	✓	*	*	*		✓			✓	…	✓	✓
Skin loss	✓	✓	✓	✓		✓	✓	✓	✓	✓	…	✓
Vascular	✓	✓		✓		✓	✓	✓	✓	✓	✓	…

* See "Arthritis" on page 28 of this document for instructions on arthritis, and page 42 for pain (causalgia).

Important: File with assessor's report

Brain and cranial nerves worksheet

For independence allowance and lump sums

Claimant name	**ACC claim number**	**Date**
Assessor name	**Assessor signature**	

Instructions

Familiarise yourself with AMA4 page 139 chapter 4. Then use this worksheet, as follows:

1. Assess all categories nine categories. (Enter your results in the right hand column.)
2. Of categories 1-5, select the one you consider the most severe for inclusion in the impairment rating.
3. Any number of the remaining categories (6-9) may also be given a rating. They are combined, and the result combined again with the most severe of categories 1-5.

Category	Page references	Rating
1 Consciousness and awareness	142 table 4	
2 Aphasia and communication	141 table 1	
3 Mental status and integrative functioning	142 table 2	
4 Emotional and behavioural	142 table 3	
5 Preoccupation or obsession	Page 69 of this document	
Enter the most severe rating for categories 1-5 here			**Subtotal A**

6 Major motor and sensory	Write your references here	
7 Movement disorders	148 table 13-15	
8 Episodic neurologic	143 table 5	
9 Sleep, arousal, fatigue	143 table 6	
Combine all categories 6-9, and enter the result here		**Subtotal B**

Grand total (combine subtotals A and B)

Preoccupation or obsession

For preoccupation or obsession:

Degree of impairment	Rating
• No impairment (self sufficient).	0-5%
• Mild impairment (needs minor help). • Impairment levels compatible with some (but not all) useful functioning.	10-20%
• Moderate impairment (needs regular help). • Impairment levels significantly impede useful functioning.	55-75%
• Extreme impairment (quite helpless). • Impairment levels preclude useful functioning.	75-100%

Trigeminal nerve

For loss of trigeminal nerve function:

Degree of impairment	Rating
Complete bilateral motor loss	30-45% of whole person
Complete bilateral sensory loss	20-35% of whole person
Complete unilateral motor loss	3-5% of whole person
Complete unilateral sensory loss	3-10% of whole person

Notes:

- Motor impairment of the trigeminal nerve may affect chewing, swallowing, and speech articulation. See AMA4 page 231 table 6 and page 233 table 7.
- For trigeminal neuralgia, see also AMA4 page 145 table 9.

Vision-testing chart (N notation)

Use at 14 inches (35.5cm)

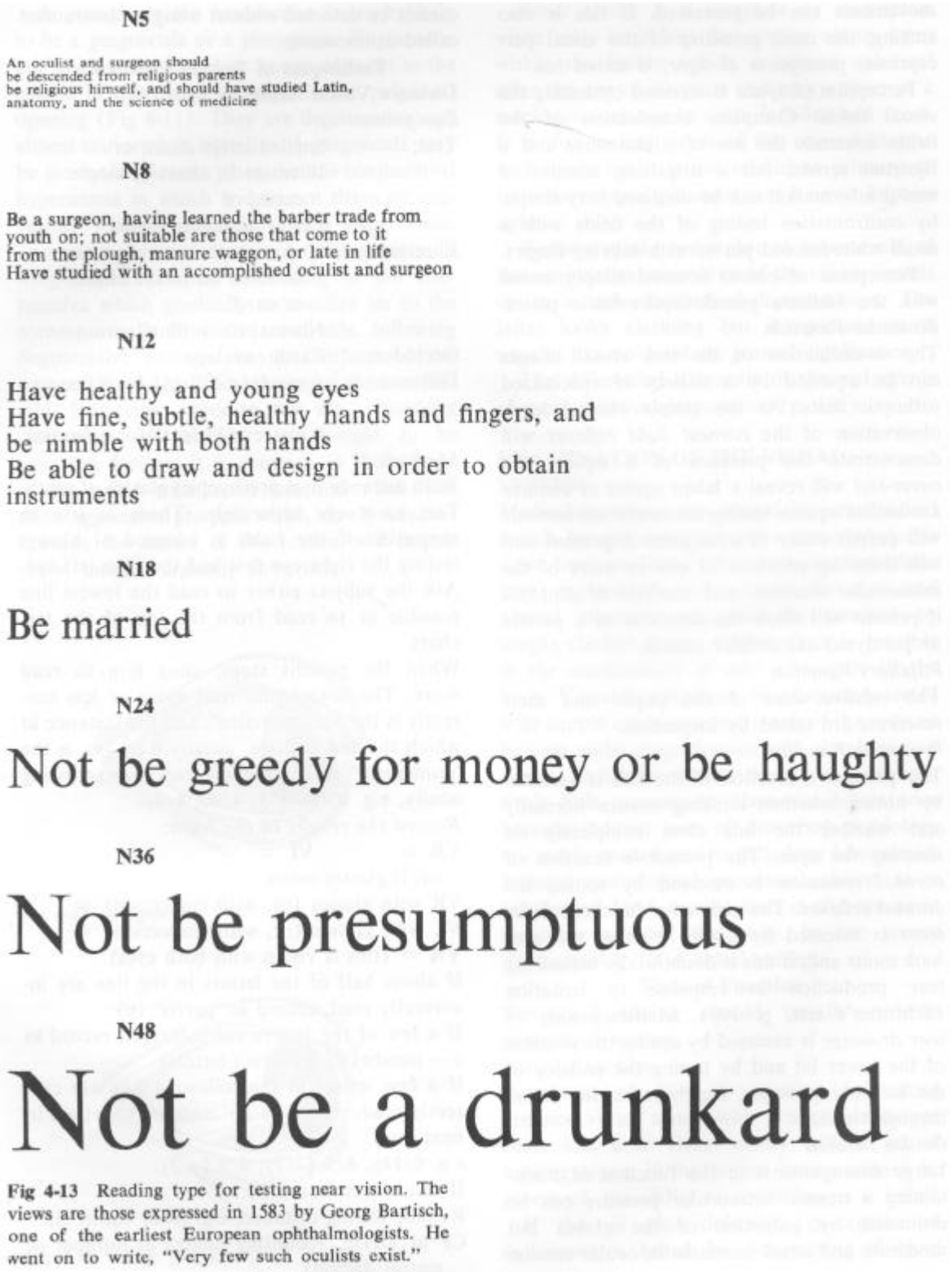


Fig 4-13 Reading type for testing near vision. The views are those expressed in 1583 by Georg Bartisch, one of the earliest European ophthalmologists. He went on to write, "Very few such oculists exist."

Important: File with assessor's report

Visual impairment worksheet

For independence allowance and lump sums

Claimant name	ACC claim number	Date
Assessor name	**Assessor signature**	

Topic	Comments	Right	Left	
Monocular aphakia is present		Yes / No	Yes / No	
Visual acuity distance (Snellen)	• See AMA4 page 211 table 2.	20 /	20 /	**A**
Visual acuity near	• See AMA4 page 211 table 2. • Also see "Visual acuity near" on page 54 of this document.	14 /	14 /	**B**
Percent loss of visual acuity	• Combine A and B for each eye (see AMA4 page 212 table 3, including footnote). • Note: Aphakia = loss of lens Psuedophakia = artificial lens			**C**
Loss of visual field	• See "Visual fields" on page 55 of this document.			**D**
Loss of VA combined with loss of VF	• Combine C and D for each eye. • See AMA4 page 322.			**E**
Loss of ocular motility (diplopia)	• Enter under worse eye. • See AMA4 page 217 section 8.3 and figure 3.			**F**
Loss of VA, VF, and OM	• For worse eye, combine E and F. • For the other eye, transfer E down to G. • See AMA4 page 322.			**G**
Other ocular functions and disturbances	• May combine 5-10% impairment for an ocular abnormality or dysfunction if you believe it isn't adequately reflected in the visual acuity, visual fields, or diplopia testing. (See AMA4 page 209 paragraph 3.) • Enter any rating you assess under the involved eye. • Justify in your report.			**H**
Loss of VA, VF, OM, and ocular dysfunction	• If an eye has additional impairment, combine G and H. • If not, transfer G down to I. • See AMA4 page 322.			**I**
Convert both eyes to the visual system	• See AMA4 page 219 table 7.			**J**
Convert the visual system to whole person	• Convert J to whole person • See AMA4 page 218 table 6.			**K**
Cosmetic deformities	• Can allow for permanent cosmetic deformities causing up to 10% whole person. • See AMA4 page 222 section 8.5.			**L**
Grand total	• Combine K and L • See AMA4 page 322.			**M**

Index to AMA4 and the User Handbook

Each entry in this index takes you either to a page in this document, or directly to a page in AMA4. All references include either HANDBOOK (for a page number in this user handbook) or AMA4 (for a page number in AMA4).

Examples:

Index entry	Meaning
Medulla, AMA4 270 section 12.5	• Go to page 270 section 12.5 in AMA4.
Arthritis, HANDBOOK 26	• Go to page 26 of the User Handbook. • There you'll find information about arthritis, under its own topic ("Arthritis").
Fracture (see subtopic "Hind foot"), HANDBOOK 29	• Go to page 29 of the User Handbook. • There you'll find information about fractures of the hind foot under the topic "Fracture" and the subtopic "Hind foot".
Axillary nerve: See "Individual peripheral nerves", HANDBOOK 42	• Go to page 42 of the User Handbook. • There you'll find information about the axillary nerve under the topic "Individual peripheral nerves".
Epididymides: See "Reproductive organs" (subtopic "Male"), HANDBOOK 43	• Go to page 43 of the User Handbook. • There you'll find information about epididymides, under the topic "Reproductive organs" and the subtopic "Male".

A

B

C

D

E

F

G

H

I

J

K

L

M

... continued on next page

N

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