Summary of Recommendations

Australian Clinical Guidelines for Health Professionals Managing People with Whiplash-Associated Disorders, Fourth Edition



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1. Acute whiplash injury care flowchart

Day 1

Initial presentation

Initial assessment

History: Assess symptoms - initial pain (VAS), initial disability (NDI), other symptoms (e.g., dizziness, headache), number of symptoms, and pre-crash health. Assess factors to establish diagnosis (WAD Grade): Canadian C-spine rule (WAD IV).

Physical examination: Assess factors to establish diagnosis (WAD Grade): neurological assessment (WAD III), cervical range of motion (ROM) and palpation (WAD 0-II).

WAD I-III

Provide guideline-based care (recommended treatments: advice, exercise, medications)[†]. For high pain, consider additional neutral treatment recommendation (intermittent immobilisation). For neuropathic pain, consider additional neutral treatment recommendation (pregabalin).

WAD IV

Manage according to cervical fracture guidelines.

By day 7

Reassess

History: Reassess pain (VAS) +/- neck disability (NDI). Add risk-assessment tool (WhipPredict or Orebro) +/- expectations of recovery.

Physical examination: Reassess ROM and palpation. WAD III: reassess neurological. Reassess need for intermittent immobilisation (collar) if prescribed for high pain.

1

LOW RISK

Continue recommended treatments. Provide "low risk advice" regarding recovery.

MEDIUM/HIGH RISK

Continue recommended treatments. Provide "medium/high risk" advice regarding recovery and consider referral for physical therapy.

WAD III not recovering

Refer for advanced imaging (MRI). If WAD III confirmed, manage according to cervical radiculopathy recommendations.



History: Reassess pain (VAS) +/- neck disability (NDI).

Week 3/Week 4

For low risk and not recovering, readminister risk-assessment tool and/or expectations of recovery.

Physical examination: Reassess ROM and palpation. WAD III: reassess neurological.







LOW RISK

If recovering, continue recommended treatments.

WAD I-II MEDIUM/HIGH RISK

Assess for post-traumatic stress symptoms (PTSS) (PCL-5), +/- depression, pain catastrophising, coping strategies.

Additional physical examination: Consider assessment of muscle function, sensorimotor function, and pain sensitivity.

If recovering, continue recommended treatments.

If not recovering, consider psychologically informed exercise, multimodal treatment (based on additional physical examination) and/or multidisciplinary care. Review medications. Refer to whiplash specialist[‡] if not confident in above.

WAD III not recovering/ worsening

Consider specialist medical referral/ opinion for WAD III.

Week 6

History: Reassess pain (VAS) +/- neck disability (NDI).

Physical examination: Reassess ROM and palpation. WAD III: reassess neurological.

MEDIUM/HIGH RISK

1

LOW RISK

If recovered, discontinue treatment.

If recovering, wean off recommended treatments such that self-managing by 12 weeks.

On average, 3 sessions are required.



History: Reassess PTSS and other psychological factors (reapply metrics).

Additional physical examination: As week 3.

If recovering, continue treatment as week 3.

If not recovering, refer to psychologist if above threshold on PCL-5 and DASS-21. Refer to physician if pain remains high for medication review. Contact insurer +/- general practitioner to facilitate. Refer to whiplash specialist if not confident in recommended physical treatments. Treatment as week 3 or follow specialist advice.



Week 12

LOW RISK

Discharge.

MEDIUM/HIGH RISK

See chronic guideline.

[†]Resources available at https://www.mywhiplash.com.au/

[‡]For the purpose of these guidelines, defined as an allied or medical healthcare professional with advanced clinical expertise in managing whiplash. May include but not limited to specialist physiotherapists and specialist physicians.

2. Chronic whiplash injury care flowchart

Week 12

Post-injury

Initial assessment

History: Assess symptoms - pain (VAS), disability (NDI) +/- other symptoms. Assess mood (depression) +/- perceived injustice. Assess functional goals and pain self-efficacy.

Physical examination: Reassess factors to establish diagnosis (WAD Grade): neurological assessment (WAD III), cervical range of motion (ROM) and palpation (WAD 0-II).



Provide recommended treatments: Advice, neck specific exercise, dizziness specific exercise, psychologically informed exercise, multimodal physical therapy and/or multidisciplinary care.

Consider if psychological therapy, e.g., trauma focused cognitive behavioural therapy (CBT), is indicated. Consider if alternate medications are indicated.

WAD I-II not recovering

Refer to whiplash specialist* and/or psychologist (if not already referred and not recovering).

WAD III not recovering

Consider referral for imaging if neurological positive, symptoms worsening (not recovering), after failure of conservative treatment.

Consider opinion of medical specialist (<5% of whiplash cases expected).

Follow medical specialist's advice.

Week 18

Post-injury

History: Reassess pain (VAS) +/- neck disability (NDI), mood (depression). Assess functional goals and pain self-efficacy.

Physical examination: Reassess ROM and palpation. WAD III: reassess neurological.

Additional examination: Consider reassessment of muscle function, sensorimotor function, and pain sensitivity.

WAD I-III recovering

Continue care as above.

Commence weaning off care to encourage self-efficacy (confidence to self-manage at discharge).

WAD I-II not recovering (moderate-to-severe disability)

Review treatment choice and consider change (to alternate but recommended treatment). Refer for whiplash specialist and/or psychologist if not already referred. Consider multidisciplinary care if not already occurring.

WAD III not recovering

Consider referral for imaging if neurological positive, symptoms worsening (not recovering), after failure of conservative treatment.

Consider opinion of medical specialist (5% of whiplash cases expected).

Follow medial specialist's advice.



Week 24

Post-injury

History: Reassess pain (VAS) +/- neck disability (NDI), pain self-efficacy, and functional goals. **Physical examination:** Reassess ROM. Reassess other domains as appropriate.





If recovering, discharge with advice.

If not recovered, follow advice from specialists. Care likely to be multidisciplinary – physical, medical, and psychological.



Week 24 to 12 months

Post-injury

Provide care in accordance with the Clinical Framework** for the Delivery of Health Services, which includes negotiation for end of care.

^{*}For the purpose of these guidelines, defined as an allied or medical healthcare professional with advanced clinical expertise in managing whiplash. May include but not limited to specialist physiotherapists and specialist physicians.

^{**}https://www.tac.vic.gov.au/providers/working-with-the-tac/clinical-framework

3. Guidelines executive summary

3.1. Acute whiplash recommendations

The following sections provide an executive summary of the Diagnosis, Prognosis, Treatment, and Assessment recommendations for the management of people with acute WAD.

3.1.1. Summary of Diagnosis recommendations

Two systematic reviews and one observational study from a general literature search informed the recommendations for diagnosis for acute whiplash. The guideline panel made the following recommendations for the diagnosis of people with acute whiplash (Table 1).

Table 1: Executive summary of Diagnosis recommendations for people with acute whiplash

Domain (WAD grade)	Index test(s)	Strength of recommendation / Vote summary
Exclude / screen for fracture (WAD IV)	Canadian C-spine rule	Strong for 9/9 100% strong for
Clinical neurological examination to screen for cervical radiculopathy (WAD III)	History: arm pain>neck pain, paraesthesia, and numbness. Physical Examination: Neurological deficit, antalgic postures.	Conditional for 3/11 27% strong for; 8/11 73% conditional for
Refer for imaging to determine probable diagnosis of cervical radiculopathy (WAD III)	MRI	Conditional for (consensus recommendation) 1/12 8% strong for; 11/12 92% conditional for

See 'Acute whiplash: Diagnosis recommendations' (section 10 of the guidelines) for implementation considerations for the diagnosis of people with acute WAD.

3.1.2. Summary of Prognosis recommendations

57 prospective longitudinal cohort studies from an electronic search of databases from Jan 1995 to 31 July 2022 informed the recommendations for prognosis for acute whiplash. The guideline panel made the following recommendations for the prognosis of people with acute whiplash (Table 2).

Table 2: Executive summary of Prognosis recommendations for people with acute whiplash

Domain	Tool / factor	Strength of recommendation / Vote summary
Prognostic tools	 WhipPredict SF-OMPSQ (Orebro) 	Strong for 9/9 100% strong for
	Initial pain intensity	
	Initial neck disability	Strong for
Symptom factors	Number of painful body areas	9/12 75% strong for; 3/12 25% conditional for
	Number of painful symptoms	conditional for
Psychological	Post-traumatic stress symptoms	Strong for
factors	Expectations of recovery	12/13 92% strong for; 1/13 8% conditional for
	Depression	On divisional for
Psychological	Pain catastrophising	Conditional for 8/13 62% conditional for; 5/13
factors	Coping strategies	38% strong for
Physical	Cervical ROM	Conditional for 11/12 92% conditional for; 1/12 8% strong for
assessment factors	Pain Sensitivity (cold hyperalgesia)	
Compensation	Claim status	Conditional for 8/10 80% conditional for; 2/10 20% neutral
factors	Lawyer retention	
	Widespread body pain	Conditional for 11/12 92% conditional for; 1/12 8% strong for
Pre-crash	Chronic neck pain	
Pre-crasii	Pre-crash general health	
	Pre-crash mental health	
	Muscle function	
	Sensorimotor function	Neutral 11/12 92% neutral; 1/12 8% conditional for
Physical	Sympathetic nervous system response	
assessment factors	Cervical bony tenderness (manual palpation)	
	BMI	
Pre-crash	Co-morbid conditions	Neutral 12/12 100% neutral
	Cancelliere et al 2021	
Prognostic tools	Bohman et al 2012	Neutral

	PPS-WAD	8/11 73% neutral; 2/11 18% conditional against; 1/11 5% conditional for
	Age	
	Gender	
	Education	
Casia damasanahia	Employment status	Conditional against
Socio-demographic	Living status	- 11/13 85% conditional against, 2/13 15% conditional for
	BMI	
	Occupation	
	Income	
	Primary HCP	Conditional against
Health care utilisation	Hospital	6/12 50% conditional against, 3/12 strong against, 2/12 neutral, 1/12 conditional for
utitisation	GP	
	Injury severity score	Conditional against
	Head restraint	
	Head position at impact	
	Awareness of collision	
	Vehicle type (injured person)	
Crash factors	Speed	9/13 69% conditional against,
	Seatbelt	4/13 21% strong against
	Self-reported collision severity	
	Position in vehicle	
	Airbag	_
	Direction of impact	
Radiological factors	Imaging: MRI, Xray CT	Strong against 10/11 91% strong against, 1/11 9% conditional against

See 'Acute whiplash: Prognosis recommendations' (section 11 of the guidelines) for implementation considerations for the prognosis of people with acute WAD.

3.1.3. Summary of Treatment recommendations

44 randomised controlled trials were retrieved from the existing Australian whiplash guidelines (1990-2007) and an electronic search of databases from 2007 to November 2022 informed the

acute WAD treatment recommendations. The guideline panel made the following recommendations for the treatment of people with acute whiplash (Table 3).

Table 3: Executive summary of Treatment recommendations for people with acute whiplash

Domain	Intervention	Strength of recommendation / Vote summary
Advice	Specific educational information	Conditional for 13/16 81% conditional for; 2/16 13% strong for; 1/16 6% neutral
	Neck specific exercises	Conditional for 12/12 100% conditional for
Physical therapy:	Dizziness specific exercises	Conditional for 13/14 93% conditional for; 1/14 7% neutral
Exercise	Psychologically informed exercise interventions	Conditional for 11/14 79% conditional for; 2/14 14% strong for; 1/14 7% neutral
HCP education	HCP implementation strategy	Conditional for 8/14 57% conditional for; 4/14 29% strong for; 2/14 14% neutral
Medications	Simple analgesics	Conditional for 9/9 100% conditional for
Medications	Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)	Conditional for 9/9 100% conditional for
	21480 (110/1120)	3/3 100/0 conditional for
Physical therapy	Multimodal physical therapy (exercise, manual therapy + other)	Neutral 7/13 54% neutral; 4/13 31% conditional for; 2/13 15% strong for
-	Multimodal physical therapy	Neutral 7/13 54% neutral; 4/13 31% conditional for;
therapy	Multimodal physical therapy (exercise, manual therapy + other)	Neutral 7/13 54% neutral; 4/13 31% conditional for; 2/13 15% strong for Neutral
therapy Multidisciplinary Immobilisation	Multimodal physical therapy (exercise, manual therapy + other) Multidisciplinary care Intermittent immobilisation (soft	Neutral 7/13 54% neutral; 4/13 31% conditional for; 2/13 15% strong for Neutral 8/9 89% neutral; 1/9 11% conditional for Neutral
therapy Multidisciplinary	Multimodal physical therapy (exercise, manual therapy + other) Multidisciplinary care Intermittent immobilisation (soft collar)	Neutral 7/13 54% neutral; 4/13 31% conditional for; 2/13 15% strong for Neutral 8/9 89% neutral; 1/9 11% conditional for Neutral 8/10 80% neutral; 2/10 20% conditional for Neutral
therapy Multidisciplinary Immobilisation	Multimodal physical therapy (exercise, manual therapy + other) Multidisciplinary care Intermittent immobilisation (soft collar) Amitriptyline	Neutral 7/13 54% neutral; 4/13 31% conditional for; 2/13 15% strong for Neutral 8/9 89% neutral; 1/9 11% conditional for Neutral 8/10 80% neutral; 2/10 20% conditional for Neutral 6/9 67% neutral; 3/9 33% conditional for Neutral
therapy Multidisciplinary Immobilisation	Multimodal physical therapy (exercise, manual therapy + other) Multidisciplinary care Intermittent immobilisation (soft collar) Amitriptyline Pregabalin	Neutral 7/13 54% neutral; 4/13 31% conditional for; 2/13 15% strong for Neutral 8/9 89% neutral; 1/9 11% conditional for Neutral 8/10 80% neutral; 2/10 20% conditional for Neutral 6/9 67% neutral; 3/9 33% conditional for Neutral 8/8 100% neutral

	Manipulation – high velocity low amplitude	12/13 92% neutral; 1/13 8% conditional against
		Cervical – Conditional against 8/13 62% conditional against; 3/13 23% strong against; 2/13 15% neutral
Medications	Opioids	Conditional against 8/10 80% conditional against; 2/10 20% neutral
Passive physical	Electrotherapy	Conditional against 9/11 82% conditional against; 2/11 strong against
therapy	Needling techniques	Conditional against 8/11 73% conditional against; 3/11 27% neutral
	Botulinum toxin-A	Conditional against 13/15 87% conditional against; 1/15 strong against; 1/15 neutral
Injections	Corticosteroid injection	Strong against 13/14 93% strong against; 1/14 7% conditional against
	IV steroid injection	Strong against 12/15 80% strong against; 3/15 20% conditional against
Other	Treatment for WAD associated headache	No specific recommendation - follow headache guidelines

See 'Acute whiplash: Treatment recommendations' (section 12 of the guidelines) for implementation considerations for the treatment of people with acute WAD.

3.1.4. Summary of Assessment consensus recommendations

32 studies retrieved from an electronic search of databases from existing TRACsa Australian whiplash guideline (database 1999- 2007), and an electronic search of databases from 2007 to June 2022 informed the assessment recommendations for people with acute whiplash. Studies were included if they compared people with whiplash to either controls or another pain condition or compared different sub-groups of people with whiplash. The assessment factor needed to be clinically feasible to assess and potentially inform treatment direction. The guideline panel made the following recommendations for the assessment of people with acute whiplash (Table 4).

Table 4: Executive summary of Assessment consensus recommendations for people with acute whiplash

Domain	Physical assessment factor	Strength of recommendation / Vote summary	
Physical assessment	Cervical ROM	Strong consensus for 12/12 100% strong for	
	Thermal hyperalgesia		
	Pressure hyperalgesia	Conditional consensus for	
Pain sensitivity	Dynamic pain sensitivity	11/12 92%conditional for; 1/12 8% neutral	
	Brachial plexus provocation test		
	Jaw pain		
Additional symptoms	Upper limb symptoms	Conditional consensus for 10/12 17% conditional for; 2/12 83% neutral	
Symptoms	Sleep quality/ disturbance	10/12 17/0 conditional 101, 2/12 00/0 neatral	
Dhysical	Cervical muscle function	Neutral consensus	
Physical assessment	Cervical muscle performance	1/1 9% conditional for; 10/11 91% neutral	
	Joint position error		
Sensorimotor	Cervical movement sense	Neutral consensus	
assessment	Oculomotor disturbance	1/12 8% conditional for; 11/12 92% neutral	
	Balance		
Additional	Fear avoidance	Neutral consensus	
psychological factors	Pain Self Efficacy	12/12 100% neutral	
1401013			
	Vibration hyperalgesia	Conditional consensus against 9/12 (75%) conditionals against; 1/12(5%)	
Pain sensitivity	Nociceptive Flexion reflex	strong against; 1/12 neutral (5%); 1/12 (5%) conditional for)	
Advanced clinical	Stress hormones	Strong consensus against 11/12 92% strong against; 1/112 8% conditional against)	
(medical) testing	Inflammatory biomarkers	Strong consensus against 11/12 92% strong against; 1/112 8% conditional against)	
Advanced Imaging	MRI to assess muscle size and morphology (muscle fat infiltration)	Strong consensus against 10/12 strong against (83%), 1/12 conditional against, 1/12 conditional for)	
	Advanced ultrasound to assess muscle stiffness	Strong consensus against 10/12 strong against (83%), 1/12 conditional against, 1/12 conditional for)	

See 'Acute whiplash: Assessment consensus recommendations' (section 13 of the guidelines) for implementation considerations for the assessment of people with acute WAD.

3.2. Chronic whiplash recommendations

The following sections provide an executive summary of the Prognosis, Treatment, and Assessment recommendations for the management of people with chronic WAD.

3.2.1. Summary of Prognosis recommendations

Six prospective longitudinal studies from an electronic search of databases from Jan 1995 to Jul 2022 informed the recommendations for prognosis of chronic whiplash. The guideline panel made the following recommendations regarding prognostic factors relevant to be assessed in people with chronic WAD (Table 5).

Table 5: Executive summary of Prognosis recommendations for people with chronic whiplash

Domain / Vote summary	Tool/ factor	Strength of recommendation / Vote summary	
	Neck pain intensity	Conditional for 11/13 85% conditional for; 2/13 15% neutral	
Symptom factors	Neck disability		
	Depression	Conditional for	
Psychological factors	Perceived injustice	11/13 85% conditional for; 2/13 15% neutral	
	Cervical ROM		
Physical assessment	Joint position error	Neutral 12/13 92% neutral; 1/13 8% conditional for	
factors	Cervical flexor and extensor strength		
	Claim status		
Componentian factors	Time to admit liability	Neutral 13 votes: 12/13 92% neutral; 1/13 8% conditional for	
Compensation factors	Economic loss claim		
	Prior claim		
	Smoker		
	Physical activity levels	Neutral	
Previous health	Physical health	12/13 92% neutral; 1/13 8% conditional	
	Previous pain episodes	for	
	General health		

	Age	Conditional against 9/13 69% conditional against; 2 strong against, 2 neutral, 1 strong for
	Gender	
Sociodemographic	Employment status	
	Education status	
	Socio-economic status	
	Driver	Conditional against
Crash factors	Collision speed	13 votes: 9/13 69% conditional against; 2 strong against, 2 neutral, 1 strong for

See 'Chronic whiplash: Prognosis recommendations' (section 15 of the guidelines) for implementation considerations for the prognosis of people with chronic WAD.

3.2.2. Summary of Treatment recommendations

19 RCT's retrieved from the existing TRACsa Australian whiplash guideline (database inception-2007) and an electronic search of databases from 2007 to November 2022 informed the chronic WAD treatment recommendations. The guideline panel made the following recommendations for the treatment of people with chronic whiplash (Table 6).

Table 6: Executive summary of Treatment recommendations for people with chronic whiplash

Domain	Intervention	Strength of recommendation / Vote summary
Advice	Specific educational information	Conditional for 12/16 75% conditional for; 3/16 19% neutral; 1/16 6% strong for
	Neck specific exercises	Conditional for 11/13 85% conditional for; 2/13 15% neutral
Physical therapy: Exercise	Dizziness specific exercises	Conditional for 12/13 92% conditional for; 1/13 8% neutral
	Psychologically informed exercise interventions	Conditional for 9/13 69% conditional for; 4/13 31% strong for
Physical therapy	Multimodal physical therapy (exercise, manual therapy and other)	Conditional for 9/12 75% conditional for; 2/12 17% neutral; 1/12 8% strong for
Psychological Interventions	Trauma focused CBT	Conditional for 13/16 81% conditional for; 3/16 19% neutral
HCP education	HCP implementation strategy	Conditional for

		8/14 57% conditional for; 4/14 29% strong for; 2/14 14% neutral
Multidisciplinary care	Multidisciplinary care	Conditional for 9/9 100% conditional for
	Simple analgesics	Neutral 8/9 89% neutral; 1/9 11% conditional for
Medications	NSAIDs	Neutral 8/9 89% neutral; 1/9 11% conditional for
	Amitriptyline	Neutral 6/9 67% neutral; 3/9 33% conditional for
	Pregabalin	Neutral 9/9 100% neutral
Psychological interventions	Exposure therapy	Neutral 8/15 53% neutral; 7/15 47% conditional for
Passive physical therapy	Massage	Neutral 8/13 62% neutral; 3/13 23% conditional against; 2/13 15% conditional for
	Acupuncture	Neutral 12/12 100% neutral
Surgery	Surgery for cervical radiculopathy	Neutral 7/8 88% neutral; 1/8 12% conditional against
Medications	Opioids	Conditional against 7/10 70% conditional against; 2/10 20% neutral; 1/10 10% strong against
	Electrotherapy	Conditional against 9/11 82% conditional against; 2/11 18% strong against
Passive physical therapy	Manipulation (high velocity low amplitude: cervical/thoracic)	Conditional against 8/13 62% conditional against; 3/13 23% strong against; 2/13 15% neutral
	Needling techniques	Conditional against 8/11 73% conditional against; 3/11 27% neutral

Medical procedure	Radiofrequency neurotomy (RFN)	Conditional against 9/11 82% conditional against; 2/11 18% strong against
	Corticosteroid injection	Strong against 10/15 67% strong against; 5/15 33% conditional against
Injections	Botulinum toxin-A	Strong against 10/14 71% strong against; 4/14 29% conditional against
	IV steroid injection	Strong against 9/15 60% strong against; 6/15 40% conditional against
Other	Treatment for WAD associated headache	No specific recommendation - follow headache guidelines

See 'Chronic whiplash: Treatment recommendations' (section 16 of the guidelines) for implementation considerations for the treatment of people with chronic WAD.

3.2.3. Summary of Assessment consensus recommendations

133 studies retrieved from an electronic search of databases from existing TRACsa Australian whiplash guideline (database 1999- 2007), and an electronic search of databases from 2007 to June 2022 informed the assessment recommendations for people with chronic whiplash. Studies were included if they compared people with whiplash to either controls or another pain condition or compared different sub-groups of people with whiplash. The assessment factor needed to be clinically feasible to assess and potentially inform treatment. The guideline panel made the following recommendations for the assessment of people with chronic whiplash (Table 7).

Table 7: Executive summary of Assessment consensus recommendations for people with chronic whiplash

Domain	Physical assessment factor	Strength of recommendation / Vote summary
Physical assessment	Cervical ROM	Strong consensus for 11/11 100% strong for
Pain sensitivity	Thermal hyperalgesia	Conditional consensus for 12/12 100% conditional for
	Pressure hyperalgesia	
	Brachial plexus provocation test	
Additional psychological factors	Depression	Conditional consensus for 12/12 (100% neutral for)

	Jaw pain	
Additional symptoms	Upper limb symptoms	Conditional consensus for 10/12 17% conditional for; 2/2 83% neutral
	Sleep quality/ disturbance	
Physical assessment muscle function	Cervical endurance	Conditional consensus for 12/12 100% conditional for
	Cervical muscle strength	
Sensorimotor	Joint position error	Conditional consensus for - 11/12 92% conditional for; 1/12 8% neutral
	Cervical movement sense	
	Oculomotor disturbance	
	Balance	
Physical Assessment	Cervical muscle performance	Neutral consensus 1/11 9% conditional for; 10/11 91% neutral
Pain sensitivity	Dynamic pain sensitivity	Neutral consensus 1/12 8%conditional for; 11/12 92% neutral
Sensorimotor	Coordination Other proprioceptive tests	Neutral consensus 2/12 17% conditional for; 10/12 83% neutral
Additional	Psychological distress	Neutral consensus 12/12 100% neutral
psychological factors	Perceived cognitive deficits	
Pain sensitivity	Vibration hyperalgesia	Conditional consensus against 11/11 100% conditional against
	Nociceptive flexion reflex	
	Stress hormones	Strong consensus against
Advanced clinical (medical) testing	Inflammatory biomarkers	1/12 8% strong for; 11/12 92% strong against
Advanced imaging	MRI to assess muscle size and morphology (muscle fat infiltration	Strong consensus against 10/10 100% strong against
	Advanced US to assess muscle stiffness	

See 'Chronic whiplash: Assessment consensus recommendations' (section 17 of the guidelines) for implementation considerations for the Assessment of people with chronic WAD.

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