Whiplash

Whiplash is an acceleration-deceleration mechanism of energy transfer to the neck. It may result from ... motor vehicle collisions ... The impact may result in bony or soft tissue injuries (whiplash injury), which in turn may lead to a variety of clinical manifestations (Whiplash-Associated Disorders)
New PIAB Form

• Please complete this section where Injury is Neck Pain or Whiplash Associated Disorder

• Assessment of Cervical Spine ROM     Normal     Abnormal

• Palpation for consistent Tenderness     Present     Absent

• Neurological Signs     Present     Absent
New PIAB Form

• Treatment Investigation to date

• The claimant should complete the Neck Disability Index (NDI)
  • NDI Score %
<table>
<thead>
<tr>
<th>WAD 0</th>
<th>No neck pain or physical signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAD 1</td>
<td>Neck Pain – Tenderness only</td>
</tr>
<tr>
<td>WAD 2</td>
<td>Neck Pain and MSK signs</td>
</tr>
<tr>
<td>WAD 3</td>
<td>Neck Pain and Neurological Signs</td>
</tr>
<tr>
<td>WAD 4</td>
<td>Neck pain and # or dislocation</td>
</tr>
</tbody>
</table>
WAD Grade (QTF)

• WAD 0
• WAD 1
• WAD 2
• WAD 3
• WAD 4.

• If the claimants WAD Score has changed during the course of the recovery please comment
Indicate the degree to which you feel the claimant's symptoms/Disability have been caused by the accident/event which is the subject of this claim.

- 1. None of the disability
- 2. A small proportion of the Symptoms/Disability < 25%
- 3. A moderate amount of the Symptoms/Disability < 50%
- 4. Most of the Symptoms/Disability 75%
- 5. All of the Symptoms/Disability
Whiplash

• Early management of whiplash-associated disorders
• INITIAL ASSESSMENT
• ASSESSMENT History and Physical Examination
• History - DoB, Sex, Education Level
• Circumstances of injury
• Symptoms – Localisation, Time of onset and profile of onset
• Pain (VAS), stiffness, numbness, weakness and extra cx symptoms
• IS AN X-RAY NEEDED? Apply Canadian C-Spine rules
Initial assessment of Whiplash

Assess WAD Quebec Score
Visual Analogue Scale  - >5/10 poor prognosis
Neck Disability Index  - >15/20 poor prognosis
Expectations of recovery
“Do you think you are going to get better soon”
Patients with the following outcome measure scores **ARE AT LOW** risk of poor recovery:

- low disability - NDI score less than 15/50
- low pain - VAS score less than 5/10
- people with a good expectation of recovery

DO NOT provide complex assessments, physical therapy referral or referral to a clinician with expertise in the management of whiplash.

**Guidelines for the management of acute whiplash associated disorders for health professionals 2014**
5. The visual analog scale (VAS)

- 10 cm horizontal line

How severe is your pain?

- No pain
- Worst pain imaginable

- The distance from no pain to the patient mark indicates the severity of pain numerically
- Advantage: simple, efficient, valid, and minimally intrusive
- Disadvantage: more time consuming than others & some difficulty in understanding in elderly
Outcome measures are the best way to identify people at risk of poor recovery.

### RECOMMENDED

**At the initial assessment** | **People at risk of poor recovery**
--- | ---
Neck Disability Index (NDI) | NDI score greater than 15/50
Visual Analogue Scale (VAS) | VAS score greater than 5/10
Expectation of recovery | Poor expectation of recovery
Initial Management of Whiplash

• Apply recommended treatments Educate and stay active Exercise
• Medication – Analgesia and NSAID ( If appropriate )
• No evidence for muscle relaxants
• Practitioners should review patients regularly, at least at the following intervals: 7 days, 3 weeks, 6 weeks, 12 weeks unless resolved earlier.
Provide treatment

Guidelines for the management of acute whiplash associated disorders for health professionals 2014

RECOMMENDED TREATMENT

ADVICE TO REMAIN ACTIVE

Provide advice to continue usual activities as this will optimise recovery.

Provide advice that restricting or not doing usual activities because of the injury may cause delays in recovery.

Discuss daily activities and provide examples on how to modify, plan and simplify activities to reduce strain on the neck and to keep active.

Refer to the whiplash fact sheet for examples of how to stay active.

REASSURANCE

Acknowledge that the person is injured and has symptoms. Advise that:
- symptoms are a normal reaction to being injured
- maintaining a normal life is important in the recovery process
- it is important to focus on improvements in function.

Encourage the injured person to take an active role in their recovery.
As recovery progresses encourage self management and independence.
Provide treatment

**RECOMMENDED TREATMENT**

**NECK EXERCISES**
Provide advice that neck exercises are effective in managing whiplash.
Recommend neck exercises such as range of motion, low load isometric, postural endurance and strengthening exercises.

**FIRST-LINE PAIN RELIEF**
Doctors should discuss strategies and medications for pain relief with the injured person.
Provide advice that regular paracetamol is the first option.
Non-Steroidal Anti-inflammatory Drugs (NSAIDs) may be used if regular paracetamol is ineffective.
Oral opioids, preferably short-acting agents at regular intervals, may be necessary to relieve severe pain. Any ongoing need for these drugs requires regular reassessment.
These treatments SHOULD NOT be used.

- Reduction of usual activities for more than 4 days
- Immobilisation collars
- Pharmacology – anti-convulsants and anti-depressants
- Muscle relaxants
- Botulinum toxin type A
- Intra-articular and intrathecal steroid injections
- Pulsed Electromagnetic Treatment (PEMT)
TREATMENTS WITH NO EVIDENCE FOR OR AGAINST THEIR USE

- Traction
- Pilates
- Feldenkrais
- Alexander technique
- Massage
- Homeopathy*
- Cervical pillows
- Magnetic necklaces
- Spray and stretch

- Heat
- Ice
- Transcutaneous Electrical Nerve Stimulation (TENS)
- Electrical stimulation
- Ultrasound
- Laser
- Shortwave diathermy
7 Day Assessment – VAS and NDI

Improving
• Continue Recommended Treatments

Not Improving
• Consider other recommended treatments
Review and take recommended action

RECOMMENDED

INITIAL ASSESSMENT
Do these assessments:
- VAS
- NDI
- Expectations of recovery.

INDICATES RECOVERY
- NDI less than 15/50.
- VAS less than 5/10.
- Good expectation of recovery.

RECOMMENDED ACTION
- Provide recommended treatments.

INDICATES RISK OF POOR RECOVERY
- NDI greater than 15/50.
- VAS greater than 5/10.
- Poor expectation of recovery.

RECOMMENDED ACTION
- Refer for physical therapy.
- Consider further psychological assessment.

Guidelines for the management of acute whiplash associated disorders for health professionals 2014
3 week Assessment

**Improving**
Continue recommended treatments or if resolved cease treatments

**Not Improving**
- Consider referral to a clinician with expertise in management of WAD
Provide treatment

USE WITH CAUTION AND MONITOR CLOSELY

These physical treatments may be used in conjunction with the recommended treatments

- Manual therapy
- Thoracic manipulation
- Acupuncture
- Kinesiotaping
- Trigger point needling

Monitor closely. Continue ONLY if there is evidence of benefit. At least a 10% improvement on VAS and NDI at each review.
6 weeks

**Improving**
- Continue recommended treatments or if resolved cease treatments

**Not improving**
- Referral to specialist with expertise in WAD. Specialist Examination should include Physical and/or psychological assessment
## Identify patients at risk of poor recovery

### RECOMMENDED

<table>
<thead>
<tr>
<th>At the 3 or 6 week review</th>
<th>People at risk of poor recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact of Events Scale (IES)</td>
<td>IES score of more than 25 / 75</td>
</tr>
</tbody>
</table>

Patients with an IES score of greater than 25 (moderate symptoms) - refer to a psychologist with experience in managing posttraumatic stress symptoms.

Guidelines for the management of acute whiplash associated disorders for health professionals 2014
Guidelines for the management of acute whiplash associated disorders for health professionals 2014

Review and take recommended action

12 WEEKS POST INJURY

Do these assessments:
• VAS
• NDI
• IES.

INDICATES RECOVERY

• Improvement of 10% on NDI and VAS.

RECOMMENDED ACTION

→ Gradually withdraw treatment and focus on interventions which require active participation and independence.

INDICATES RISK OF POOR RECOVERY

• VAS and NDI scores are high or unchanged.
• IES higher than 25.

RECOMMENDED ACTION

→ Follow recommendation from specialist.
→ Refer for coordinated multidisciplinary care.
→ Follow the NHMRC chronic whiplash pathway.
Review and take recommended action

3 WEEKS POST INJURY

Do these assessments:
• VAS
• NDI

Where the patient has unchanged VAS and NDI, do this assessment:
• IES - screen for posttraumatic stress.

INDICATES RECOVERY
• Improvement of 10% on NDI and VAS.

RECOMMENDED ACTION
→ Continue recommended treatments.

INDICATES RISK OF POOR RECOVERY
• VAS and NDI scores are high or unchanged.
• IES higher than 25.

RECOMMENDED ACTION
→ Conduct a more comprehensive physical and psychological examination.
→ Consider referral to a clinician with expertise in whiplash management.
→ Refer to psychologist for:
  • adjustment difficulties
  • management of pain, and/or
  • posttraumatic stress management.
WAD and MRI

WAD 1 and WAD 2
• MRI has no role

WAD 3
• MRI might be used
MRI and Back Pain

Results of MRI in those without back pain.

The presence of radiological findings in whiplash injury is NOT predictive of poor recovery.
Predictive of poor recovery

• Symptoms

• Higher initial neck pain levels – Ongoing Pain/Disability/Psychological Work Disability
  Higher initial disability - Ongoing disability
  Self Perceived injury Severity
Predictive of poor recovery

• Psychological
  • PTSD Symptoms
  • Negative expectation of recovery
  • Somatisation
    • Depression
    • Pain Catastrophising
Predictive of poor recovery

• Physical Examination

  Cervical Range of Movement
Identify patients at low risk of poor recovery

These factors **DO NOT** predict risk of poor recovery

- age, gender, marital status and education
- seat belt use, awareness of impending collision, position in vehicle and speed of collision
- pre-collision pain or general health status
- high healthcare utilisation for treatment of whiplash.
- Shoulder pain
- Radiological findings
• MRI, CT, EEG, EMG, or specialised peripheral neurological test for WAD I and WAD II

• X-ray or CT - except to diagnose fracture or dislocation (avoid unnecessary exposure to radiation)
Visit our website for whiplash videos and other resources to help you recover.

sira.nsw.gov.au/injuryadvicecentre

Catalogue no. SIRA08113

This presentation may contain information that relates to the regulation of workers compensation insurance, motor accident third party (CTP) insurance and home building compensation in NSW. It may include details of some of your obligations under the various schemes that the State Insurance Regulatory Authority (SIRA) administers. However to ensure you comply with your legal obligations you must refer to the appropriate legislation as currently in force. Up to date legislation can be found at the NSW legislation website legislation.nsw.gov.au.

This presentation does not represent a comprehensive statement of the law as it applies to particular problems or to individuals, or as a substitute for legal advice. You should seek independent legal advice if you need assistance on the application of the law to your situation.

This material may be displayed, printed and reproduced without amendment for personal, in-house or non-commercial use.