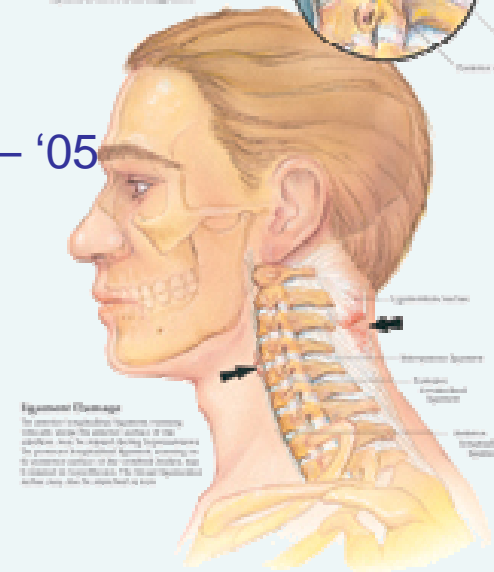
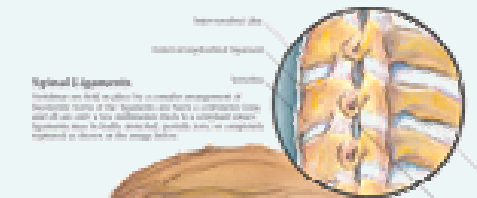
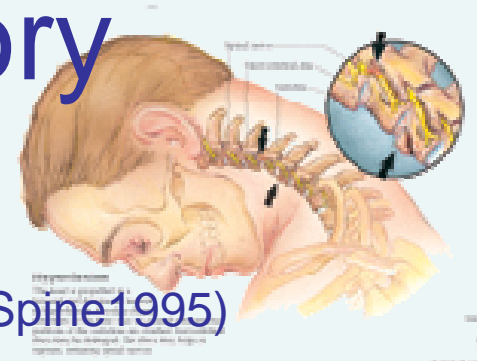
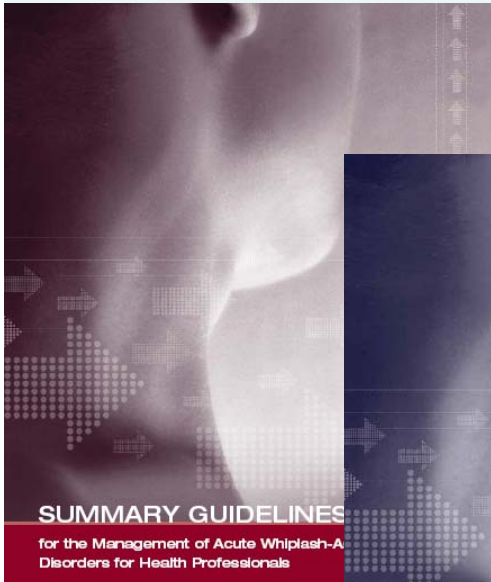


WAD... A Brief History

- Quebec Task Force (QTF)
 - (Redefining Whiplash and it's Management published Spine 1995)
- Motor Accident Authority (MAA)
 - Reviewed 2001 & 2005
- Latest guidelines published 2007
 - Working party review of literature from '95 – '01 & '99 – '05
 - Focus of group was to look at key areas
 - Assessment & Diagnosis
 - Prognosis of WAD
 - Treatment of WAD
 - Efficacy of treatment

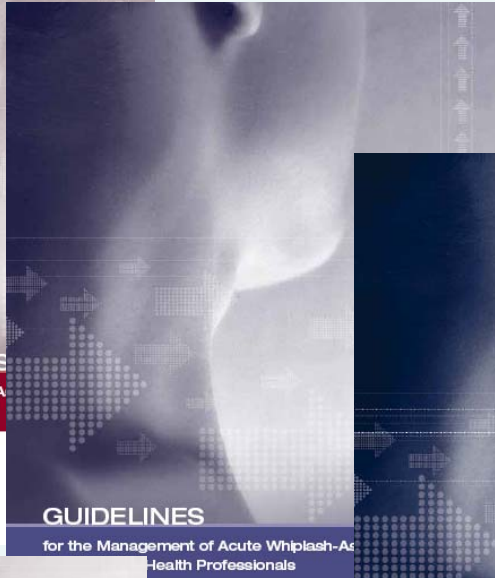




SUMMARY GUIDELINES

for the Management of Acute Whiplash-Associated Disorders for Health Professionals

2nd Edition 2007



GUIDELINES

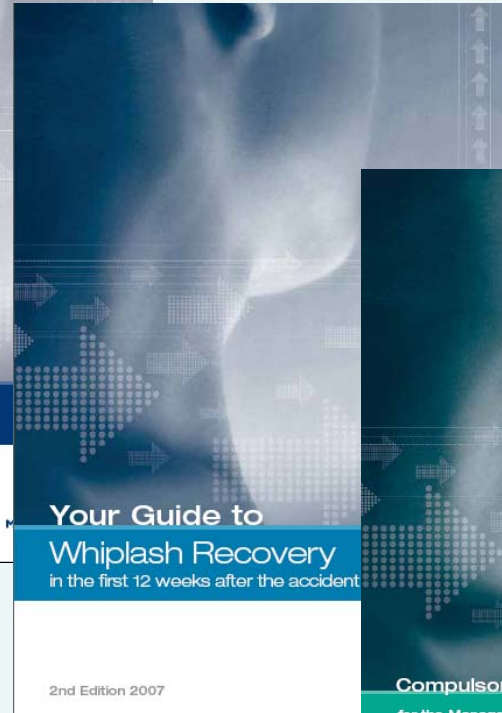
for the Management of Acute Whiplash-Associated Disorders for Health Professionals



TECHNICAL REPORT

Guidelines for the Management of Acute Whiplash-Associated Disorders

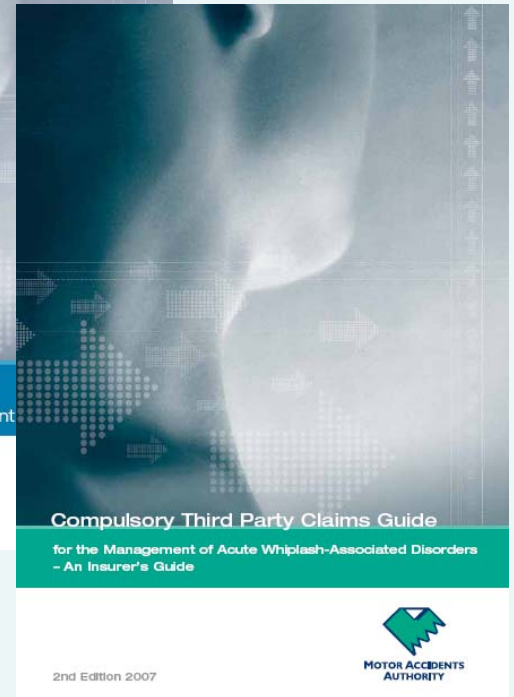
2nd Edition 2007



Your Guide to Whiplash Recovery

in the first 12 weeks after the accident


2nd Edition 2007



Compulsory Third Party Claims Guide

for the Management of Acute Whiplash-Associated Disorders - An Insurer's Guide

2nd Edition 2007



MAA Whiplash Guidelines – GP Summary

In a patient with a neck injury in a motor vehicle crash

1. When do I X-ray?

Follow The Canadian C-spine Rule (see page 4):

- ▶ 65 years of age and over
- ▶ Dangerous mechanism (e.g., high speed (>100km/h), rollover or ejection, recreational vehicle or bicycle crash)
- ▶ Or unable to rotate 45 degrees to L and R

If any of these are present then X-ray

2. Who do I have to worry about?

▶ People who have high initial pain intensity (Visual Analogue Scale (VAS) >7/10). Take a VAS scale at initial assessment and review all people with a VAS >7/10 at least at 1 week then 3 weeks after injury (see flowchart page 2).

Pain Visual Analogue Scale (VAS)

0 No pain 10 Pain as bad as it could possibly be

3. What do I tell my whiplash patients?

▶ Every whiplash patient should receive the recommended treatments of reassurance, exercise (see Consumer Guide) and analgesia as clinically indicated (see full Guidelines for details). You can do this or refer to another primary health care practitioner such as a physiotherapist or chiropractor.

4. When do I refer?

▶ When they are not recovering

- If there is less than a 10% change on the VAS at the 3 week review or sooner if clinically indicated, (see flowchart on page 2), refer to a whiplash specialist (e.g., a rehabilitation physician, psychologist or specialist physiotherapist).

Resources

Copies of the Consumer Guide available from: the MAA Claims Advisory Service: Phone 1300 650 816
Full Guidelines available online: www.maa.nsw.gov.au (click on 'Whiplash Guidelines')
Details of Specialist Physiotherapists available from: www.physiotherapy.nsw.gov.au (click on 'Find a Physio')



Definition Of WAD

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). (QTF '95)

Quebec Task Force Classification of Grades of WAD

Grade	Classification
0	No complaint about the neck. No physical sign(s).
I	Complaint of neck pain, stiffness or tenderness only. No physical sign(s).
II	Neck complaint AND musculoskeletal sign(s). Musculoskeletal signs include decreased range of movement and point tenderness.
III	Neck complaint AND neurological sign(s). Neurological signs include decreased or absent tendon reflexes, weakness and sensory deficits.
IV	Neck complaint AND fracture or dislocation

ASSESSMENT

History & Physical Examination

Is an X-ray needed? – Apply Canadian C-Spine Rule (see page 7)

NO

YES

Assess Classify WAD grade
Pain – Visual Analogue Scale (VAS) and
Disability – Neck Disability Index (NDI)

X-ray
- ve + ve

Define WAD grade
WAD I WAD II WAD III

WAD Grade IV

Apply recommended treatments

- Educate, act as usual
- Exercise
- Prescribed Function
- Pharmacology

Immediate referral to
Emergency
Department
or Specialist



INITIAL VISIT

Case History Questions Relating To WAD

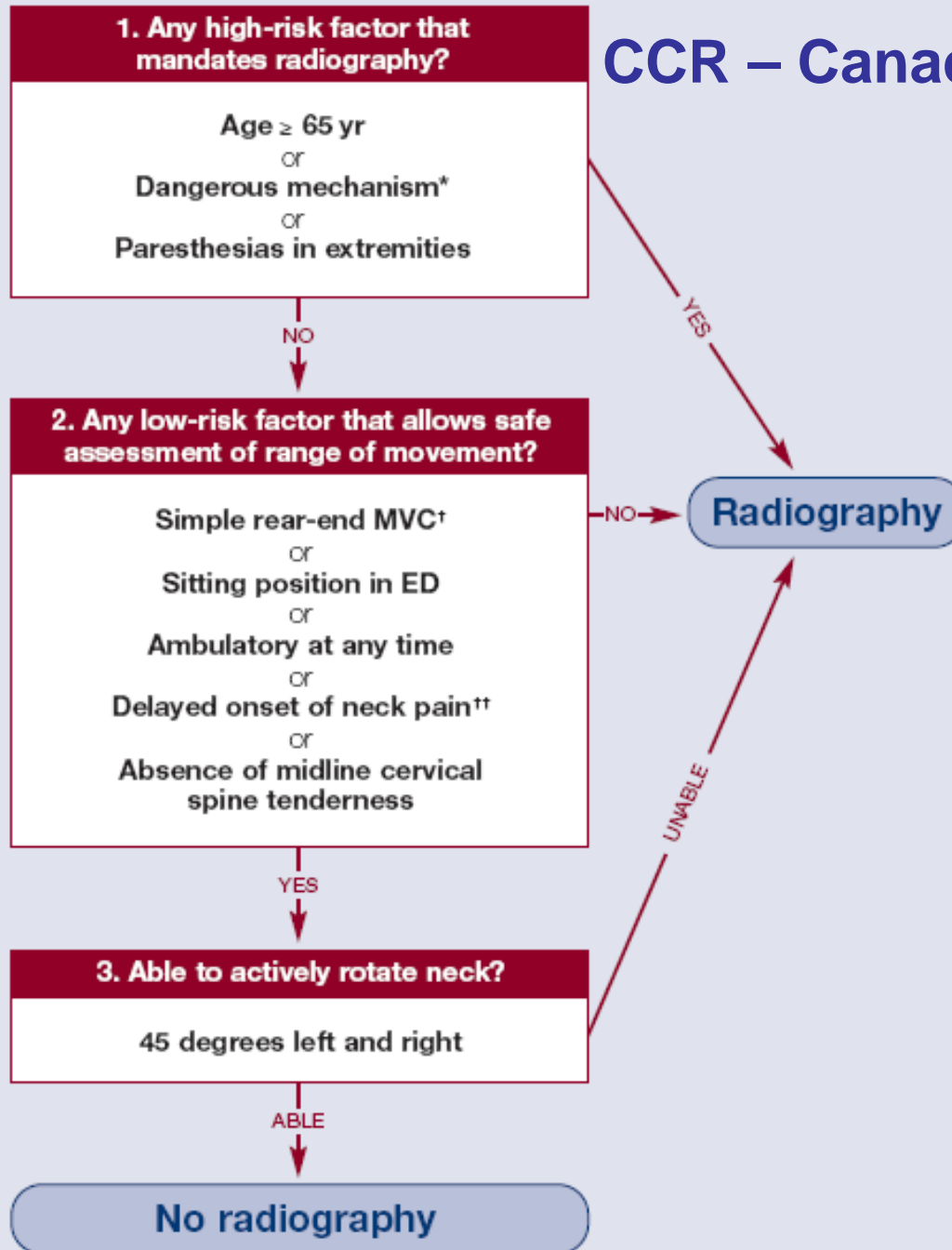
- Get your patient to describe the accident and prompt appropriately for
- Where/When was the accident
 - At a junction, traffic lights, motorway
- Driver/passenger
- Speed
 - Stationary? What was road speed?
- Weather conditions
- Braking, handbrake on?
- Restrained/unrestrained
- On which side did the collision occur, more than 1 collision,
- Air bags deploy
- Able to walk away/cut out
- Ambulance/police attend
- A&E, assessed, diagnosis, admitted, Investigations, treatment
- Any fatalities

So what do I tell my patients?

- Give your working diagnosis as to which grade you think most fits the subjective and objective findings
- Reassure patient that WAD (I/II) normally resolves within 3/12
- Discuss your management plan in terms of
 - Your outlined expectations for the patient
 - How you plan to treat (techniques you intend to use)
 - Your exercise program to increase FX (CROM)
 - Discuss why there is no need to x-ray at this time
 - Reassure your patient that activation & compliance are the keys to successful rehabilitation

So when do I x-ray?

CCR – Canadian C-Spine Rule



Key

* Dangerous mechanism

- Fall from elevation ≥ 91.5 cm / 5 stairs
- Axial load to head, e.g., diving
- MVC (Motor Vehicle Collision) high speed (>100km/h), rollover, ejection
- Motorised recreational vehicles
- Bicycle crash

† Simple rear-end MVC excludes

- Pushed into oncoming traffic
- Hit by bus/large truck
- Rollover
- Hit by high-speed vehicle

†† Delayed

- i.e., not immediate onset of neck pain

2007 Guidelines On Investigations

WAD Grades I and II

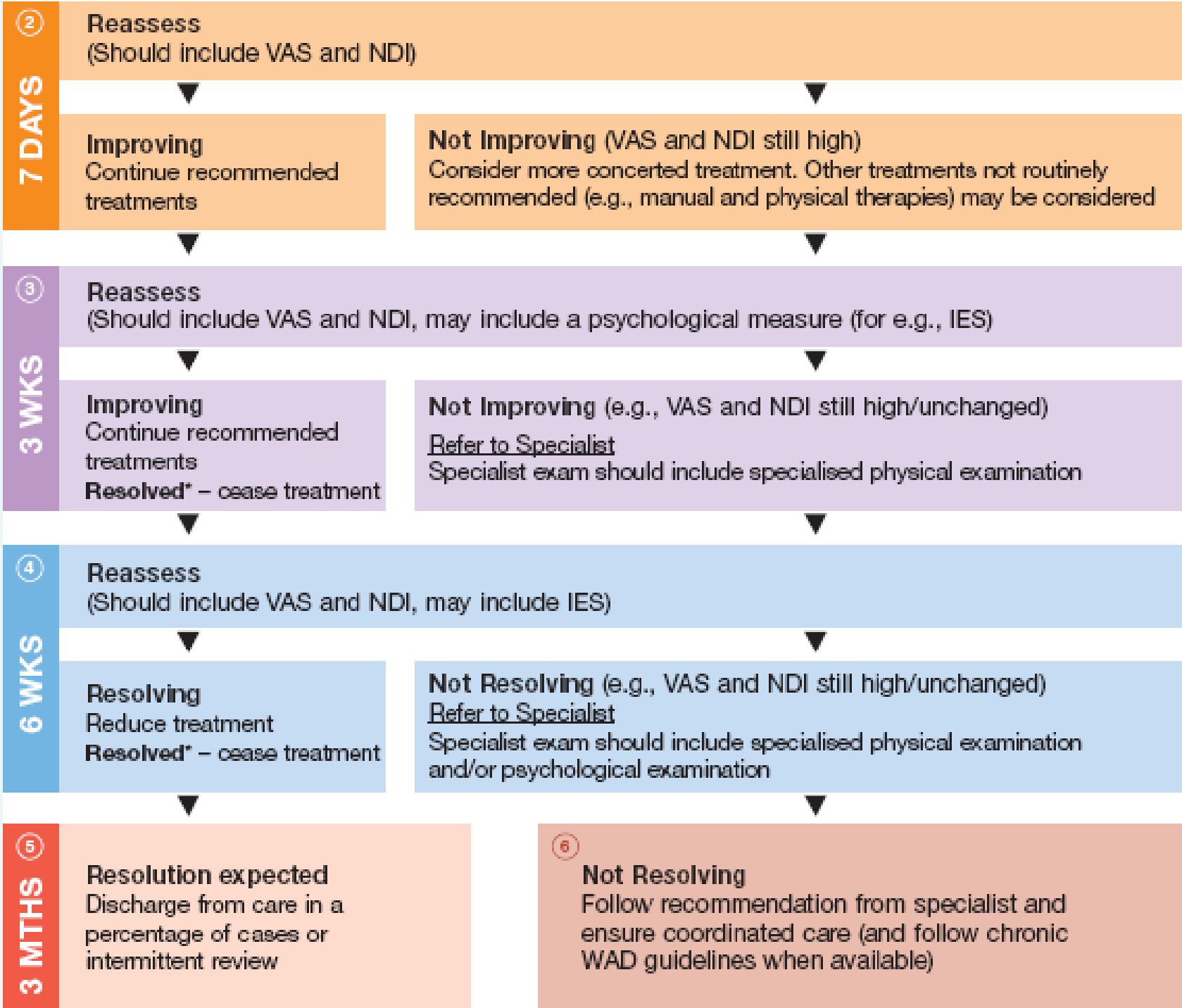
There is no role for specialised examination techniques (e.g., EEG, EMG and specialised peripheral neurological tests) in patients with WAD Grades I or II.

WAD Grade III

Specialised examinations may be used in selected patients with WAD Grade III, e.g., patients with nerve root compression or suspected spinal cord injury, on the advice of a medical or surgical specialist.

When Do I Refer?

- If the emerging clinical picture is deteriorating (red flags)
- At your 3 week review if your not seeing at least a 10% change in the VRS
- Patient displaying abnormal illness behaviour (yellow flags, non compliant)
- Other?



Neck Disability Index (NDI)

- The NDI is designed to measure neck-specific disability and is based on the Oswestry Disability
- The questionnaire has 10 items concerning pain and activities of daily living
 - personal care
 - lifting
 - reading
 - Headaches
 - concentration,
 - work status
 - driving
 - sleeping
 - recreation
- Each item is scored out of 5
 - (with the no disability response given a score of 0)
 - Total score for the questionnaire out of 50.
- Higher scores represent greater disability. (>20/50)

Treatment Protocols

Guidelines 2007: Reassurance

The practitioner should acknowledge that the patient is hurt and has symptoms, and advise that:

- **symptoms are a normal reaction to being hurt;**
- **maintaining normal life activities is an important factor in getting better;**
- **staying active is important in the recovery process;**
- **voluntary restriction of activity may cause delayed recovery**
- **it is important to focus on improvements in function.**

Guidelines 2007: Work

- **Prescribed function (i.e., return to usual activity as soon as possible) is recommended.**
- **Rehabilitation programs, which may include alterations to an individual's work schedule, may assist recovery depending on symptoms (e.g., pain, ability to concentrate) and psychosocial factors.**

Guidelines 2007: Exercise

- **ROM and muscle re-education exercises to restore appropriate muscle control and support to the cervical region in patients with WAD should be implemented immediately, if necessary in combination with intermittent rest when pain is severe.**
- **Clinical judgement is crucial if symptoms are aggravated by exercise**

Guidelines 2007: Pharmacology

WAD Grade I

- no medication other than simple analgesics should be prescribed.
- Opioid analgesics are not recommended for patients with WAD Grade I.

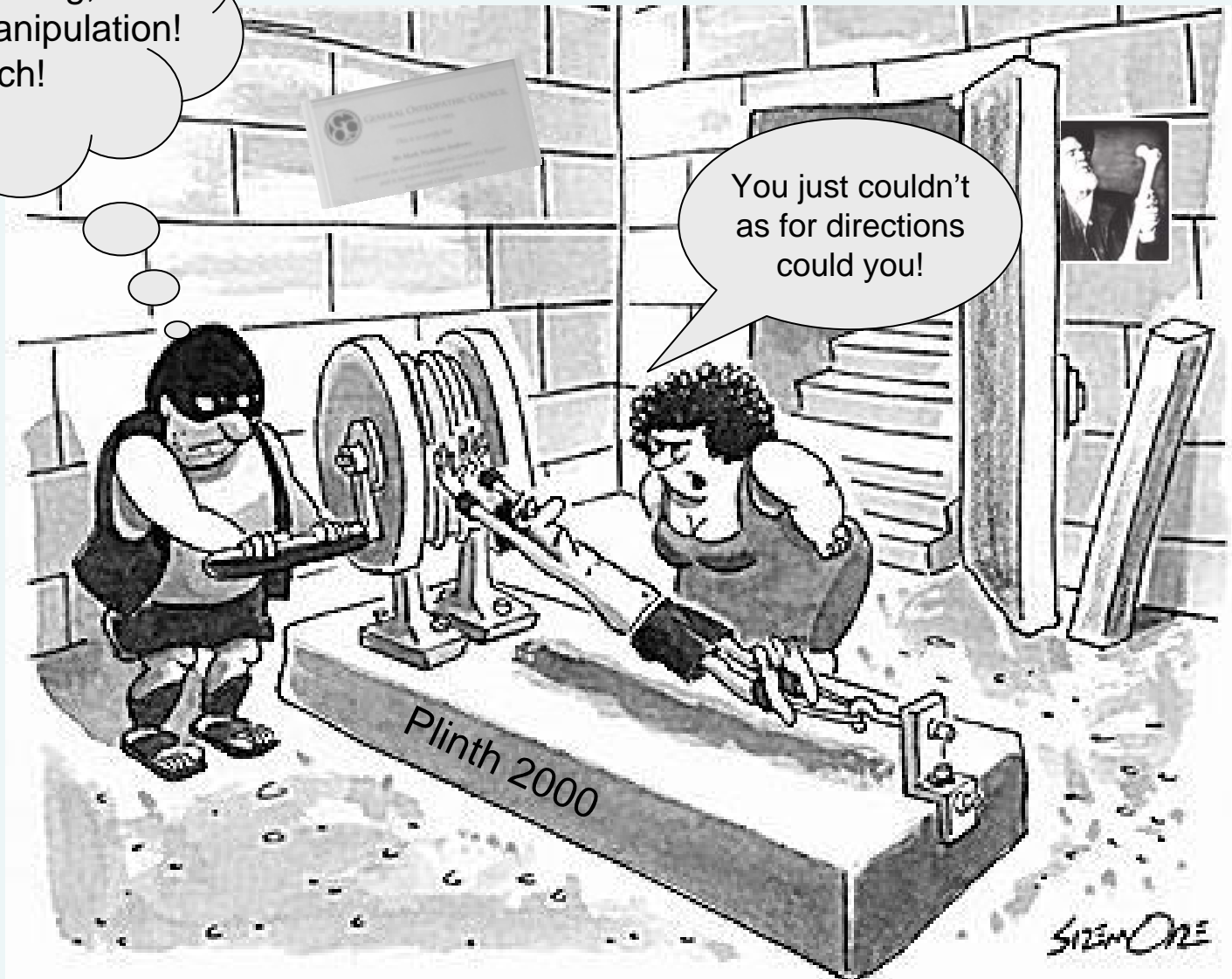
WAD Grades II and III –

- Non-opioid analgesics and NSAIDs can be used to alleviate pain in the short term.
 - Their use should be limited to three weeks and should be weighed up against known side-effects, which appear to be dose related.
- Opioid's may be prescribed for pain relief in patients
 - with acute WAD Grades II and III experiencing severe pain (VAS > 8) for a limited period of time.
- Muscle relaxants should not generally be used in patients with acute or subacute phase WAD.
- Psychopharmacologic drugs are not recommended in patients with acute and subacute WAD of any grade.
 - can be used occasionally for symptoms such as insomnia or tension or as an adjunct to activating interventions in the acute phase.
- Use of high-dose intravenous methylprednisolone infusion for acute management of patients with WAD Grades II and III is not recommended.

Your Approach?

A bit of traction, a bit of birching, a quick manipulation! then lunch!

You just couldn't as for directions could you!



Miss Jemma J., a 24yr old, part time retail assistant and part time carer presented on the 1st August 2007 complaining of predominantly neck and shoulder pain but also a dull ache in her low back.

She reports a PMI over the left posteriolateral aspect of the neck and shoulder with no radiculopathy or weakness being reported. The lumbar pain was described as central over the lumbro sacral joint.

The onset was described as July 25th when the patient was involved in a RTA. She described the accident as follows...

Travelling on a country road with a restricted 30mph limit, in daylight with perfect visibility and fine weather, her vehicle was struck head on by an oncoming car that crossed over into her lane forcing her to take evasive action and swerve into the nearside hedge row in an attempt to avoid the collision.

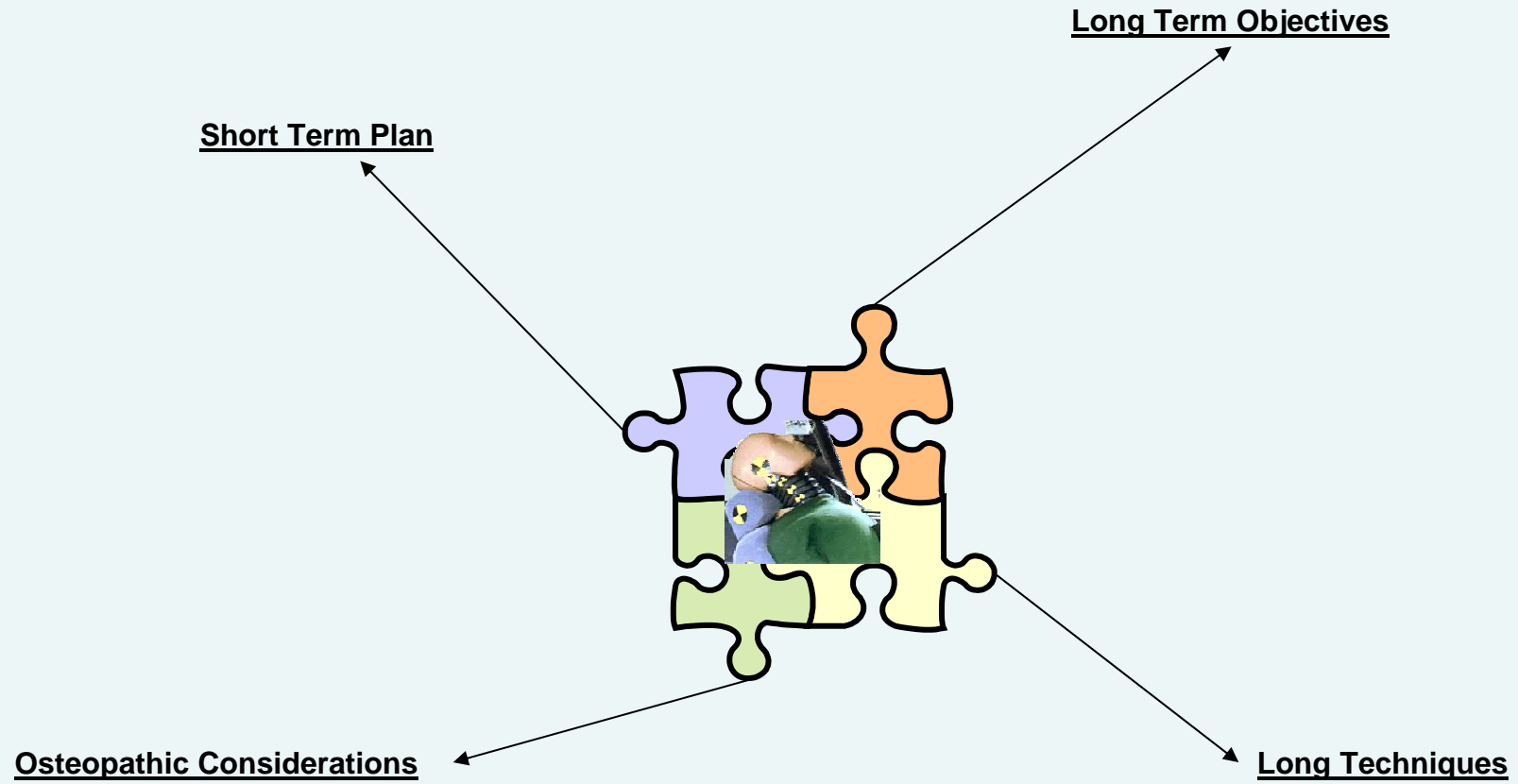
She was restrained in the vehicle by a seatbelt and reported that all airbags deployed. She was unable to exit the vehicle via the drivers door due to the extent of damage done to the car. She was cut out by the emergency services and placed on a spinal board as a precautionary measure and transported to the local A&E.

A full examination was conducted and x-rays deemed unnecessary at that time. She was discharged to the care of her GP a number of hours later with a prescription of ibuprofen.

Based on the info you've been presented with.....

- What's your likely working diagnosis?
- What's your Other likely DD?
- What are the examination routines you would consider in this case
- And finally what's your treatment approach going to be?

Osteopathic Treatment Approach To WAD



Previous Guidelines (2001)

Recommendations for 2007 Guidelines

Recommended Treatment

- ▶ Reassure / Act as usual
- ▶ Prescribed functional exercises – return to usual activity, work alteration, relaxation techniques
- ▶ Exercise – ROM exercises, muscle re-education, low-load isometric exercises
- ▶ Pharmacology – simple analgesics, NSAIDs

- ▶ Reassure / Act as usual
- ▶ Prescribed functional exercises – return to usual activity, work alteration
- ▶ Exercise – ROM exercises, muscle re-education
- ▶ Pharmacology – simple analgesics

Treatments Not Routinely Recommended

- ▶ Postural advice
- ▶ Passive joint mobilisation
- ▶ Manipulation
- ▶ Traction
- ▶ Acupuncture
- ▶ Multimodal treatment
- ▶ Passive modalities / electrotherapies
- ▶ Immobilisation – prescribed rest
- ▶ Immobilisation – collars
- ▶ Surgical treatment

- ▶ Postural advice
- ▶ Passive joint mobilisation
- ▶ Manipulation
- ▶ Traction
- ▶ Acupuncture
- ▶ Multimodal treatment
- ▶ Passive modalities / electrotherapies
- ▶ Surgical treatment
- ▶ Pharmacology – NSAIDs and strong analgesics

Treatments Not Recommended

- ▶ Cervical pillows
- ▶ Spray and stretch
- ▶ Intra-articular and intrathecal steroid injections
- ▶ Magnetic necklaces
- ▶ Other interventions e.g., Pilates, massage, etc

- ▶ Cervical pillows
- ▶ Spray and stretch
- ▶ Intra-articular and intrathecal steroid injections
- ▶ Magnetic necklaces
- ▶ Other interventions e.g., Pilates, massage, etc
- ▶ Immobilisation – prescribed rest for > 4 days
- ▶ Immobilisation – collars for > 48 hours
- ▶ Pharmacology – Psychopharmacological agents

Strength of evidence*	Ongoing pain symptoms	Ongoing disability
Factors associated with poor prognosis		
Strong evidence	• High initial pain intensity	• High initial disability
	• High initial disability	• Limited education
		• Cold sensitivity • Reduced cervical range of movement
Moderate evidence		• High initial pain intensity
Limited evidence		• Previous pain symptoms
		• Compensation factors
		• High utilisation of treatment
Inconclusive evidence	• Psychosocial factors	• Psychosocial factors
	• Educational level	
	• Crash factors	
	• Compensation factors	
	• Employment status	
	• High utilisation of treatment	
Factors found not to be associated with poor prognosis		
Strong evidence	• X-ray changes	• Age (< 65 years)
	• Age (< 65 years)	• Marital status
	• Sex	• Crash factors
	• Marital status	• Increased EMG activity on superficial muscles
Moderate evidence	• Previous pain symptoms	• Sex
Limited evidence		• Pressure Pain Threshold
		• Body Mass Index