

RATING SPINAL IMPAIRMENT

BY: LES WHITE, DC

Has no financial relationship or benefit from
this program





Impairment vs. disability

- **IMPAIRMENT:** the loss of function of an organ or part of the body.

- **DISABILITY:** the inability to function at a specific task or job.



Impairment vs. disability

- The distinction is important because in Washington State the law requires that awards be based on impairment, not on disability.
- That means the worker's financial situation is not taken into consideration in rating impairment.



Who can rate impairment?

- 1. Doctors performing IMEs

- 2. Attending doctors may rate their own patients if they are licenses in:
 - Medicine
 - Osteopathy
 - Dentistry
 - Chiropractors who are on the approved examiners list



Who can perform ratings

- 3. Consultants:

If the attending doctor does not wish to perform the rating, he/she can refer the worker to a consultant for the rating.



When do you rate impairment?

- The worker needs to be at maximal medical improvement (MMI or fixed and stable).

A point reached when an impairment is unlikely to be significantly improved by further medical treatment and the worker has reached a stable plateau from which further recovery is not reasonably expected.



Five required components

- Any rating must contain all of the following:
 1. MMI
 2. Examination findings
 3. Diagnostic tests
 4. Rating
 5. Rationale



- Sound medical judgment must be used.
- You need to base your conclusions on objective findings
- State your rationale clearly.

- Objective findings



Impairment rating systems used in Washington State

- Washington Category Rating System
- AMA Guides to the Evaluation of Permanent Impairment 5th Edition
- RCW 51.32.080
- Total Bodily Impairment (TBI)



Category rating system covers the:

- Spine
- Neurologic system
- Mental health
- Respiratory
- Taste and smell
- Speech
- Skin
- Disorders affecting other internal organs



- Flexibility of the category system
- Best fit



Category rating system

- Is the worker's pain considered in the rating?
- Is the worker's financial need considered in the rating?



Preexisting conditions (MEH page 30)

- Three terms:
Aggravation
Worsening
Exacerbation

All three terms are used synonymously in
Washington



Preexisting conditions

Two separate legal concepts:

1. Lighting up
2. Segregation



Preexisting conditions

- A worker may have had a condition that was asymptomatic and non-disabling, and then the injury or occupational disease causes the condition to become a problem for the worker.
- This would represent a **lighting up**.



Preexisting conditions

- A worker may have an injury or contact an occupational disease that accelerates a preexisting symptomatic or disabling condition, or causes it to become worse.
- This would represent a **segregation**.



Preexisting conditions

- A worker may have an underlying condition that was temporarily affected by an injury or occupational disease, and now has returned to pre-injury status.
- **Neither concept would apply.**



Preexisting conditions

- A worker may have a preexisting condition which is not affected by an injury or occupational disease.
- **Neither concept would apply.**



Dorso-lumbar and lumbo-sacral impairment (MEH page 75)

- WAC 296-20-270
- WAC 296-20-280



General principles for lumbosacral impairment (WAC 296-20-270)

- Bladder and/or bowel sphincter impairments are rated separately from the lumbar spine impairment.
 - For bladder, use WAC 296-20-630
 - For bowel sphincter, use WAC 296-20-530



General principles for lumbosacral impairment

- Laminectomy, discectomy, and fusion should only be considered in the rating to the extent that they produce impairment.
- **There are no automatic ratings.** The rating depends on the clinical outcome.



General principles for lumbo-sacral impairment

- For example, a fusion patient with:
 - an average outcome may be a Category 4
 - an excellent outcome may be a Category 2
 - a poor outcome may be a Category 5



WAC 296-20-270

- 1. Rules for evaluation of permanent dorso-lumbar and lumbosacral impairment are as follows:
- 1.a. Muscle spasm or involuntary guarding, bony or fibrous fusion, any arthritic condition, internal fixation devices or other physical finding shall be considered, in selecting the appropriate category but only insofar as they produce an impairment.



WAC 296-20-270

- 1.b. Gradations of clinical findings of low back impairment in terms of “mild”, “moderate”, or “marked” shall be based on objective medical tests.
- 1.c. All the low back categories include the presence of complaints of whatever degree.



WAC 296-20-270

1.d. Any and all neurological deficits, complaints, and/or findings in other bodily areas or systems which are the result of dorso-lumbar and lumbosacral impairments, except for objectively demonstrated bladder and/or bowel sphincter impairments, shall be evaluated by the descriptions contained in the categories of dorso-lumbar and lumbosacral impairments.



WAC 296-20-270

- 1.e. Bladder and/or bowel sphincter impairments derived from dorso-lumbar and lumbo-sacral impairments shall be evaluated separately.
- 1.f. Low back as used in these rules and categories include the lumbar and adjacent areas.

Categories (WAC 296-20-280) (MEH pages 76 and 77)

Choose the category below which best describes the patient's impairment:

Category 1. No objective clinical findings. Subjective complaints and/or sensory losses may be present or absent.

Category 2. Mild low back impairment, with mild intermittent objective clinical findings of such impairment but no significant x-ray findings and no significant objective motor loss. Subjective complaints and/or sensory losses may be present.

Category 3. Mild low back impairment, with mild continuous or moderate intermittent objective clinical findings of such impairment but without significant x-ray findings or significant objective motor loss. This and subsequent categories include: the presence or absence of reflex and/ or sensory losses; the presence or absence of pain locally and/or radiating into an extremity or extremities; the presence or absence of a laminectomy or discectomy with normally expected residuals.

Category 4. Mild low back impairment, with mild continuous or moderate intermittent objective clinical findings of such impairment, with mild but significant x-ray findings and with mild but significant motor loss objectively demonstrated by atrophy and weakness of a specific muscle or muscle group. This and subsequent categories include the presence or absence of a surgical fusion with normally expected residuals.

Category 5. Moderate low back impairment, with moderate continuous or marked intermittent objective clinical findings of such impairment, with moderate x-ray findings and with mild but significant motor loss objectively demonstrated by atrophy and weakness of a specific muscle or muscle group.

Category 6. Marked low back impairment, with marked intermittent objective clinical findings of such impairment, with moderate or marked x-ray findings and with moderate motor loss objectively demonstrated by atrophy and weakness of a specific muscle or muscle group.

Category 7. Marked low back impairment, with marked continuous objective clinical findings of such impairment, with marked x-ray findings and with marked motor loss objectively demonstrated by marked atrophy and weakness of a specific muscle or muscle group.

Category 8. Essentially total loss of low back functions, with marked x-ray findings and with marked motor loss objectively demonstrated by marked atrophy and weakness of a muscle group or groups.

Exercise # 1 (MEH #3)

A 36-year-old meat wrapper had low back pain and left lower extremity (thigh and leg) pain with weakness of hamstrings and EHL on the left. MRI revealed a herniated disc at L4-5 on the left. Laminotomy and discectomy were performed at L4- 5 on the left, with relief of lower limb (but not back) pain. On examination, he has:

- Residual sensory radiculopathy in the left L5 distribution.
- No weakness in specific muscle groups.
- Symmetrical Patellar and Achilles tendon reflexes.
- Positive SLR on the left for radicular pain.

No follow-up diagnostic studies had been obtained.

Categories (WAC 296-20-280)

Choose the category below which best describes the patient's impairment:

Category 1. No objective clinical findings. Subjective complaints and/or sensory losses may be present or absent.

Category 2. Mild low back impairment, with mild intermittent objective clinical findings of such impairment but no significant x-ray findings and no significant objective motor loss. Subjective complaints and/or sensory losses may be present.

Category 3. Mild low back impairment, with mild continuous or moderate intermittent objective clinical findings of such impairment but without significant x-ray findings or significant objective motor loss. This and subsequent categories include: the presence or absence of reflex and/or sensory losses; the presence or absence of pain locally and/or radiating into an extremity or extremities; the presence or absence of a laminectomy or discectomy with normally expected residuals.

Category 4. Mild low back impairment, with mild continuous or moderate intermittent objective clinical findings of such impairment, with mild but significant x-ray findings and with mild but significant motor loss objectively demonstrated by atrophy and weakness of a specific muscle or muscle group. This and subsequent categories include the presence or absence of a surgical fusion with normally expected residuals.

Exercise # 2 (MEH #4)

A 28-year-old logger fell from a 15 foot height and developed bilateral lower extremity weakness and numbness plus loss of bowel and bladder control. Emergency myelogram revealed a large central herniated disc at L1-2 pressing on the conus medullaris and a left posterolateral disc herniation at L5-S1. Following emergency discectomy, he has:

- Regained bowel and bladder control.
- Residual bilateral sciatica, loss of Achilles tendon reflex on the left, and residual 2/5 weakness on ankle plantar flexion.
- Left leg circumference 3.0 cm smaller due to calf muscle atrophy.
- Loss of sensation in the S1 nerve root distribution; guarding at the L5-S1 level; SLR positive for radicular pain.
- A consistent pattern over repeated office visits of asymmetric range-of-motion limitation, including decreased extension and left lateral flexion.

Categories (WAC 296-20-280)

Choose the category below which best describes the patient's impairment:

Category 3. Mild low back impairment, with mild continuous or moderate intermittent objective clinical findings of such impairment but without significant x-ray findings or significant objective motor loss. This and subsequent categories include: the presence or absence of reflex and/or sensory losses; the presence or absence of pain locally and/or radiating into an extremity or extremities; the presence or absence of a laminectomy or discectomy with normally expected residuals.

Category 4. Mild low back impairment, with mild continuous or moderate intermittent objective clinical findings of such impairment, with mild but significant x-ray findings and with mild but significant motor loss objectively demonstrated by atrophy and weakness of a specific muscle or muscle group. This and subsequent categories include the presence or absence of a surgical fusion with normally expected residuals.

Category 5. Moderate low back impairment, with moderate continuous or marked intermittent objective clinical findings of such impairment, with moderate x-ray findings and with mild but significant motor loss objectively demonstrated by atrophy and weakness of a specific muscle or muscle group.

Category 6. Marked low back impairment, with marked intermittent objective clinical findings of such impairment, with moderate or marked x-ray findings and with moderate motor loss objectively demonstrated by atrophy and weakness of a specific muscle or muscle group.

Exercise # 3 (MEH #2)

A 22-year-old grocery clerk has:

- Low back pain, radiating to the buttocks bilaterally, no neurological deficit.
- Give-way weakness in the lower extremities and all major muscle groups tested.
- No muscle atrophy.
- Reflexes two plus and symmetrical at patellar and Achilles tendons.
- Supine SLR negative (producing only low back pain at 30 degrees bilaterally).
- Sitting SLR negative to 90 degrees.
- Axial loading and en bloc rotation of the torso produce low back pain.
- Lumbar spine films normal. CT scan reveals loss of disc height at L5-S1 but is otherwise within normal limits.

Categories (WAC 296-20-280)

Choose the category below which best describes the patient's impairment:

Category 1. No objective clinical findings. Subjective complaints and/or sensory losses may be present or absent.

Category 2. Mild low back impairment, with mild intermittent objective clinical findings of such impairment but no significant x-ray findings and no significant objective motor loss. Subjective complaints and/or sensory losses may be present.

Category 3. Mild low back impairment, with mild continuous or moderate intermittent objective clinical findings of such impairment but without significant x-ray findings or significant objective motor loss. This and subsequent categories include: the presence or absence of reflex and/ or sensory losses; the presence or absence of pain locally and/or radiating into an extremity or extremities; the presence or absence of a laminectomy or discectomy with normally expected residuals.

Category 4. Mild low back impairment, with mild continuous or moderate intermittent objective clinical findings of such impairment, with mild but significant x-ray findings and with mild but significant motor loss objectively demonstrated by atrophy and weakness of a specific muscle or muscle group. This and subsequent categories include the presence or absence of a surgical fusion with normally expected residuals.



Case examples of low back impairment (# 3 continued)

- Waddell's signs are non-organic physical signs in low back pain (such as axial loading and cogwheel "give-way" weakness). They are distinguishable from the standard clinical signs of physical pathology and correlate with other psychological data.
- For more information, see Waddell, G., et al.: Non-organic physical signs in low back pain, *Spine* 5:117, 1980.



Rating lumbar spine impairment

- There are a total of eleven case examples in the Medical Examiner's Handbook.
- We encourage you to do all of them to further develop your skill in rating the lumbar spine using the Category Rating System.
- The answers to all of the case examples are listed after the last case.



Rating the lumbar spine using the worksheet

- Designed to improve consistency, fairness, and “user friendliness”.
- Attending doctors can use the worksheet as the rating report, when it is filled out completely, signed, and dated. In general, it is best to submit the worksheet with a brief narrative report (usually less than one page) summarizing the patient history, exam findings, your rating and rationale.



Worksheet overview

- Caution regarding SEVERE impairments (for example, “marked” atrophy and muscle weakness, paraplegia or quadriplegia).
- Caution regarding PREEXISTING conditions.
- The worksheet should be used in conjunction with the WACs.



Worksheet overview

- You are encouraged to use the worksheet as you deem appropriate.
- If you prefer, you can refer directly to the WACs in the MEH.



Guidelines for dorso-lumbar and lumbo-sacral impairment

- Use of the following guidelines (from the MEH) is **not** required. They are intended to offer guidance.
- The guidelines attempt to give better definition and clarity to the terms:
 - “mild but significant”,
 - “moderate”, and
 - “marked”.



Dorso-lumbar and lumbosacral impairment worksheet (MEH V-19)

In all sections of the guidelines, only consider findings that are consistent with the clinical picture. (MEH V-18)

Guidelines for:

1. Atrophy
2. EMG abnormalities
3. Muscle weakness
4. Reflex loss
5. X-ray or imaging findings
6. Misc. findings



Atrophy

- For the calf or thigh, the difference in circumference of:
- 1-1.9 cm. = **mild**
- 2-2.9 cm. = **moderate**
- 3+ cm. = **marked**
- Atrophy should not be considered in the rating if it can be explained by non-spine related problems.



EMG abnormalities

EMG abnormalities are considered significant if unequivocal electrodiagnostic evidence exists of acute nerve root compromise, such as:

multiple positive sharp waves or fibrillation potentials; or

H-wave absence or delay greater than 3 mm/sec; or

chronic changes such as polyphasic waves in peripheral muscles.



Muscle weakness

- **Mild** = 4/5 (Complete motion against gravity and less than full resistance);
- **Moderate** = 3/5 (Barely complete motion against gravity);
- **Marked** = 2/5 – 0/5 (Complete motion with gravity eliminated, to no evidence of contractility)



Reflex loss

In general, only asymmetric reflex losses should be considered significant for the purposes of impairment rating.



X-ray or imaging findings

- The following categorization is NOT intended to be a comprehensive list of findings which may be described as mild, moderate, or marked.
- **Be sure to only include findings which are consistent with the clinical picture.**



MILD	MODERATE	MARKED
<p>Any of the following without hypermobility or radiculopathy:</p> <ul style="list-style-type: none">• spondylolysis• spondylolisthesis• vertebral body fracture with < 25% compression of one vertebral body• post-surgical state	<ul style="list-style-type: none">• hypermobility or translation > 4.5 mm at a single level• vertebral body fracture with 25-50% compression of one vertebral body	<ul style="list-style-type: none">• hypermobility or translation >4.5 mm at multiple levels• vertebral body fracture with > 50% compression of one vertebral body



Other imaging findings

- Disc bulges or degenerative changes in the absence of concurrent clinical presentation should be considered insignificant.
- Disc narrowing, spurring, and arthrosis are part of the aging process and may be considered insignificant depending on the circumstances of the individual patient.
- However, principles pertaining to preexisting conditions must be considered. (Refer to the MEH, Preexisting Conditions and Segregation).



Miscellaneous findings

- The list below is **not** intended to be a comprehensive list of findings which may be considered for the purposes of impairment rating.
- **Again, be sure to only include findings which are consistent with the clinical picture.**



These may be considered in an impairment rating:

- Dermatomal sensory loss
- Positive straight-leg-raising with radicular pattern
- Muscle guarding
- Asymmetric loss of active range-of-motion
- Femoral nerve stretch
- Lumbar foraminal compression with lower extremity radicular pattern (Kemp's test)
- Waddell's signs*



These should NOT be considered in an impairment rating:

- Pain scales (for example, the Oswestry pain scale)

A	B	C	D
Muscle Weakness AND: EITHER Atrophy or EMG abnormalities (See "notes" below.)	Reflex loss (In general only Asymmetric losses are significant.)	Imaging and X-ray findings EXAMPLES: Degenerative disk disease, fracture disrupting the spinal canal, bulging disc (Only include findings which are consistent with clinical picture.)	Other Findings EXAMPLES: Dermatomal sensory loss, decreased range-of-motion, muscle guarding, +SLR (Only include findings which are consistent with the clinical picture.) NOT TO BE CONSIDERED: OSWESTRY OR OTHER PAIN SCALES
Circle one none (1)	Circle one none (1)	Circle one none (1)	Circle one none (1)
		Explain: MRI shows central disc herniation at L5-S1 not impinging on nerve root.	mild intermittent (2)
	knee <input type="checkbox"/> yes ankle <input type="checkbox"/> yes (3)		mild continuous or moderate intermittent (3)
mild but significant (4)			
			moderate continuous or marked intermittent (5)
moderate (6)			
marked (7)			marked continuous (7)
Give muscle group and specific abnormalities:			essentially total loss of low back functions (8)
Step 4: Calculate Rating (If you want L&I to do the calculation, copy the numbers into the 1st 4 boxes and go to Step 5.)			Box number circled in Column A: 1 Box number circled in Column B: 3 Box number circled in Column C: 4 Box number circled in Column D: 1 Total 9 Average (total divided by 4) 2.25

Section

V

Notes: • Column A: Mild Weakness = 4/5 (Complete motion against gravity and less than full resistance);
Moderate = 3/5 (Barely complete motion against gravity);
Marked = 2/5 - 0/5 (Complete motion with gravity eliminated to no evidence of contractility).

- Pain is considered in the rating, but must be reflected in findings described on this worksheet (for example, decreased range-of-motion).



Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.)
This is the rating: **2**

Step 5: Certification	I certify that I have examined the patient within the last 8 weeks and that the above report truly and correctly sets forth my findings and opinion.		
	Doctor's address	ZIP+4	Provider No.
	123 Maple Dr. Seattle, WA 98xxx-xxxx		12345
Print Dr's name	Today's date	Doctor's signature	
John Smith M.D.	1/1/05	John Smith M.D.	

Example (MEH page 81)

A 28 year old male was injured when lifting a 50 pound container out of a van. He developed sharp low back pain, radiating down the left leg into the left foot. The patient received non-operative treatment, including physical therapy and NSAIDS. At the time of the impairment exam he has moderate intermittent pain. On examination he had:

- diminished ankle jerk on the left.
- tenderness at L4-L5 and L5-S1 with deep pressure.
- MRI showed central disc herniation at L5-S1 slightly eccentric to the left not impinging on the nerve root.

Doctor's Worksheet for Rating Dorso-Lumbar & Lumbo-Sacral Impairment

Example

Mr. X, a 28 year old male, was injured when lifting a 50 pound container out of a van. He developed sharp back pain, radiating down the left leg into the left foot. The patient received non-operative treatment, including physical therapy and non-steroidal medications. At the time of the impairment rating examination Mr. X reported moderate intermittent pain. Physical examination was unremarkable except for diminished ankle jerk on the left and tenderness at L4-L5 and L5-S1 with deep pressure. MRI showed central disc herniation at L5-S1 slightly eccentric to the left not impinging on a nerve root. The worksheet for Mr. X would look like the Sample Worksheet below.

A	B	C	D														
Muscle Weakness AND: EITHER Atrophy or EMG abnormalities (See "notes" below.)	Reflex loss (In general only Asymmetric losses are significant.)	Imaging and X-ray findings EXAMPLES: Degenerative disk disease, fracture disrupting the spinal canal, bulging disc (Only include findings which are consistent with clinical picture.)	Other Findings EXAMPLES: Dermatomal sensory loss, decreased range-of-motion, muscle guarding, +SLR (Only include findings which are consistent with the clinical picture.) NOT TO BE CONSIDERED: OSWESTRY OR OTHER PAIN SCALES														
Circle one none (1)	Circle one none (1)	Circle one none (1)	Circle one none (1)														
	knee <input type="checkbox"/> yes ankle <input type="checkbox"/> yes (3)		mild intermittent (2)														
mild but significant (4)		mild but significant (4)	mild continuous or moderate intermittent (3)														
		moderate (5)	moderate continuous or marked intermittent (5)														
moderate (6)		marked (6)	marked continuous (7)														
marked (7)			essentially total loss of low back functions (8)														
Give muscle group and specific abnormalities:																	
<p>Step 4: Calculate Rating (If you want L&I to do the calculation, copy the numbers into the 1st 4 boxes and go to Step 5.)</p>			<table border="1"> <tr> <td>Box number circled in Column A:</td> <td>1</td> </tr> <tr> <td>Box number circled in Column B:</td> <td>3</td> </tr> <tr> <td>Box number circled in Column C:</td> <td>4</td> </tr> <tr> <td>Box number circled in Column D:</td> <td>1</td> </tr> <tr> <td>Total</td> <td>9</td> </tr> <tr> <td>Average (total divided by 4)</td> <td>2.25</td> </tr> <tr> <td>Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.) This is the rating:</td> <td>2</td> </tr> </table>	Box number circled in Column A:	1	Box number circled in Column B:	3	Box number circled in Column C:	4	Box number circled in Column D:	1	Total	9	Average (total divided by 4)	2.25	Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.) This is the rating:	2
Box number circled in Column A:	1																
Box number circled in Column B:	3																
Box number circled in Column C:	4																
Box number circled in Column D:	1																
Total	9																
Average (total divided by 4)	2.25																
Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.) This is the rating:	2																
<p>Notes: • Column A: Mild Weakness = 4/5 (Complete motion against gravity and less than full resistance); Moderate = 3/5 (Barely complete motion against gravity); Marked = 2/5 - 0/5 (Complete motion with gravity eliminated to no evidence of contractility).</p> <p>• Pain is considered in the rating, but must be reflected in findings described on this worksheet (for example, decreased range-of-motion).</p>																	

Section V



I certify that I have examined the patient within the last 8 weeks and that the above report truly and correctly sets forth my findings and opinion.

Step 5: Certification	Doctor's address 123 Maple Dr. Seattle, WA 98xxx-xxxx	ZIP+4	Provider No. 12345
	Print Dr's name John Smith M.D.	Today's date 1/1/05	Doctor's signature <i>John Smith M.D.</i>

Exercise # 1

(MEH #3)

A 36-year-old meat wrapper had low back pain and left lower extremity (thigh and leg) pain with weakness of hamstrings and EHL on the left. MRI revealed a herniated disc at L4-5 on the left. Laminotomy and discectomy were performed at L4- 5 on the left, with relief of lower limb (but not back) pain. On examination, he has:

- Residual sensory radiculopathy in the left L5 distribution.
- No weakness in specific muscle groups.
- Symmetrical Patellar and Achilles tendon reflexes.
- Positive SLR on the left for radicular pain.

No follow-up diagnostic studies had been obtained.

Claimant's name

Claim #

- Step 1. (a) Has the worker's condition reached maximum medical improvement? Yes No If "No," do not rate. Please provide treatment recommendations.
 (b) If there is a pre-existing condition, was it permanently aggravated by the industrial injury? Yes No N/A If "Yes," attach explanation.
 Step 2. Is there any permanent impairment? Yes No
 Step 3. Circle one box in each column A through D below. Give brief explanation below (REQUIRED). *Your entries should reflect the patient's current*

A	B	C	D
Muscle Weakness <i>AND:</i> EITHER Atrophy or EMG abnormalities (See "notes" below.)	Reflex loss <i>(In general only Asymmetric losses are significant.)</i>	Imaging and X-ray findings EXAMPLES: Degenerative disk disease, fracture disrupting the spinal canal, bulging disc <i>(Only include findings which are consistent with clinical picture.)</i>	Other Findings EXAMPLES: Dermatomal sensory loss, decreased range-of-motion, muscle guarding, +SLR <i>(Only include findings which are consistent with the clinical picture.)</i> NOT TO BE CONSIDERED: OSWESTRY OR OTHER PAIN SCALES
Circle one	Circle one	Circle one	Circle one
none (1)	none (1)	none (1)	none (1)
			mild intermittent (2)
	knee <input type="checkbox"/> yes ankle <input type="checkbox"/> yes (3)		mild continuous or moderate intermittent (3)
mild but significant (4)		mild but significant (4)	
		moderate (5)	moderate continuous or marked intermittent (5)
moderate (6)		marked (6)	
marked (7)			marked continuous (7)
Give muscle group and specific abnormalities:			essentially total loss of low back functions (8)

Tear on perforated line

Step 4: Calculate Rating (If you want L&I to do the calculation, copy the numbers into the 1st 4 boxes and go to Step 5.)

- Notes: • Column A: Mild Weakness = 4/5 (Complete motion against gravity and less than full resistance);
 Moderate = 3/5 (Barely complete motion against gravity);
 Marked = 2/5 - 0/5 (Complete motion with gravity eliminated to no evidence of contractility).

- Pain is considered in the rating, but must be reflected in findings described on this worksheet (for example, decreased range-of-motion).

Box number circled in Column A:	
Box number circled in Column B:	
Box number circled in Column C:	
Box number circled in Column D:	
Total	
Average (total divided by 4)	

Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.)
 This is the rating:



Claimant's name

Claim #

Exercise # 2

(MEH #4)

A 28-year-old logger fell from a 15 foot height and developed bilateral lower extremity weakness and numbness plus loss of bowel and bladder control. Emergency myelogram revealed a large central herniated disc at L1-2 pressing on the conus medullaris and a left posterolateral disc herniation at L5-S1. Following emergency discectomy, he has:

- Regained bowel and bladder control.
- Residual bilateral sciatica, loss of Achilles tendon reflex on the left, and residual 2/5 weakness on ankle plantar flexion.
- Left leg circumference 3.0 cm smaller due to calf muscle atrophy.
- Loss of sensation in the S1 nerve root distribution; guarding at the L5-S1 level; SLR positive for radicular pain.
- A consistent pattern over repeated office visits of asymmetric range-of-motion limitation, including decreased extension and left lateral flexion.

- Step 1. (a) Has the worker's condition reached maximum medical improvement? Yes No If "No," do not rate. Please provide treatment recommendations.
 (b) If there is a pre-existing condition, was it permanently aggravated by the industrial injury? Yes No N/A If "Yes," attach explanation.
- Step 2. Is there any permanent impairment? Yes No
- Step 3. Circle one box in each column A through D below. Give brief explanation below (REQUIRED). *Your entries should reflect the patient's current*

A		B		C		D	
Muscle Weakness AND: EITHER Atrophy or EMG abnormalities (See "notes" below.)		Reflex loss (In general only Asymmetric losses are significant.)		Imaging and X-ray findings EXAMPLES: Degenerative disk disease, fracture disrupting the spinal canal, bulging disc (Only include findings which are consistent with clinical picture.)		Other Findings EXAMPLES: Dermatomal sensory loss, decreased range-of-motion, muscle guarding, +SLR (Only include findings which are consistent with the clinical picture.) NOT TO BE CONSIDERED: OSWESTRY OR OTHER PAIN SCALES	
Circle one	Circle one	Circle one	Explain:	Circle one	Explain:		
none (1)	none (1)	none (1)		none (1)			
				mild intermittent (2)			
	knee <input type="checkbox"/> yes ankle <input type="checkbox"/> yes (3)			mild continuous or moderate intermittent (3)			
		mild but significant (4)					
				moderate continuous or marked intermittent (5)			
		moderate (6)					
		marked (7)		marked continuous (7)			
		Give muscle group and specific abnormalities:			essentially total loss of low back functions (8)		
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						Box number circled in Column B:	
						Box number circled in Column C:	
						Box number circled in Column D:	
						Total	
						Average (total divided by 4)	
						Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.) This is the rating:	

Tear on perforated line

Notes: • Column A: Mild Weakness = 4/5 (Complete motion against gravity and less than full resistance);
 Moderate = 3/5 (Barely complete motion against gravity);
 Marked = 2/5 - 0/5 (Complete motion with gravity eliminated to no evidence of contractility).

• Pain is considered in the rating, but must be reflected in findings described on this worksheet (for example, decreased range-of-motion).



Section V

Exercise # 3

(MEH #1)

A 45-year-old man has a six month history of mild low back pain, bilateral sciatica, and subjective numbness of the right fifth toe.

- There is no weakness of specific muscle groups.
- Reflexes are 1+ and symmetrical at the knee and ankle.
- Straight leg raise produces low back pain at 80 degrees at hip flexion bilaterally.
- Sensory exam is within normal limits.
- Lumbar spine film shows mild spurring at L4-L5.
- MRI reveals loss of disc height and desiccation at L4-L5 and L5-S1. There is a moderate sized central disc protrusion at L1-L2 without impingement on the thecal sac.

Claimant's name _____ Claim # _____

- Step 1. (a) Has the worker's condition reached maximum medical improvement? Yes No If "No," do not rate. Please provide treatment recommendations.
 (b) If there is a pre-existing condition, was it permanently aggravated by the industrial injury? Yes No N/A If "Yes," attach explanation.
- Step 2. Is there any permanent impairment? Yes No
- Step 3. Circle one box in each column A through D below. Give brief explanation below (REQUIRED). *Your entries should reflect the patient's current*

A		B		C		D	
Muscle Weakness AND: EITHER Atrophy or EMG abnormalities (See "notes" below.)		Reflex loss (In general only Asymmetric losses are significant.)		Imaging and X-ray findings EXAMPLES: Degenerative disk disease, fracture disrupting the spinal canal, bulging disc (Only include findings which are consistent with clinical picture.)		Other Findings EXAMPLES: Dermatomal sensory loss, decreased range-of-motion, muscle guarding, +SLR (Only include findings which are consistent with the clinical picture.) NOT TO BE CONSIDERED: OSWESTRY OR OTHER PAIN SCALES	
Circle one	Circle one	Circle one	Explain:	Circle one	Explain:		
none (1)	none (1)	none (1)		none (1)			
				mild intermittent (2)			
	knee <input type="checkbox"/> yes ankle <input type="checkbox"/> yes (3)			mild continuous or moderate intermittent (3)			
mild but significant (4)		mild but significant (4)					
		moderate (5)		moderate continuous or marked intermittent (5)			
moderate (6)		marked (6)					
marked (7)				marked continuous (7)			
Give muscle group and specific abnormalities:				essentially total loss of low back functions (8)			
Step 4: Calculate Rating (If you want L&I to do the calculation, copy the numbers into the 1st 4 boxes and go to Step 5.)						Box number circled in Column A:	
						Box number circled in Column B:	
						Box number circled in Column C:	
						Box number circled in Column D:	
						Total	
						Average (total divided by 4)	
						Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.) This is the rating:	

Notes: • Column A: Mild Weakness = 4/5 (Complete motion against gravity and less than full resistance);
 Moderate = 3/5 (Barely complete motion against gravity);
 Marked = 2/5 - 0/5 (Complete motion with gravity eliminated to no evidence of contractility).

• Pain is considered in the rating, but must be reflected in findings described on this worksheet
 (for example, decreased range-of-motion).



Section
V



Rating lumbar spine impairment

- There are a total of eleven lumbar case examples in the MEH.
- We would encourage you to do all the case examples to further develop your skill in using the worksheet to rate the lumbar spine.
- The answers to all the case examples are listed after the last case.



Cervical and cervico-dorsal impairment (MEH page 64)

- WAC 296-20-230
- WAC 296-20-240



General principles for cervical and cervico-dorsal impairment

- Bladder and/or bowel sphincter impairments are rated separately from the cervical spine impairment.
 - For bladder, use WAC 296-20-630
 - For bowel sphincter, use WAC 296-20-530



General principles for cervical and cervico-dorsal impairment

- Discectomy and fusion should only be considered in rating impairment to the extent that they produce impairment. **There are no automatic ratings.** The rating depends on the clinical outcome.



General principles for cervical and cervico-dorsal impairment

- For example, a cervical discectomy and/or fusion patient with:
 - sensory loss may be a Category 2
 - weakness and numbness in the upper extremity may be a Category 4 or above



WAC 296-20-230

- 1. Rules for evaluation of permanent cervical and cervico-dorsal impairment are as follows:
 - 1.a. Muscle spasm or involuntary guarding, bony or fibrous fusion, any arthritic condition, internal fixation devices or other physical finding shall be considered, in selecting the appropriate category but only insofar as they produce an impairment.



WAC 296-20-230

- 1.b. Gradations of clinical findings of cervico-dorsal impairment in terms of “mild”, “moderate”, or “marked” shall be based on objective medical tests.
1.c. Categories 2, 3, 4, and 5 include the presence of complaints of whatever degree in the neck or extremities.



WAC 296-20-230

- 1.d. Bladder and/or bowel sphincter impairments derived from cervical and cervico-dorsal impairments shall be evaluated separately.
- 1.e. Neck as used in these rules and categories include the cervical and adjacent areas.

Categories (WAC 296-20-240) (MEH page 64)

Choose the category below which best describes the patient's impairment:

Category 1. No objective clinical findings. Subjective complaints may be present or absent.

Category 2. Mild cervico-dorsal impairment, with objective clinical findings of such impairment with neck rigidity substantiated by x-ray findings of loss of anterior curve, without significant objective neurological findings.

- This and subsequent categories include the presence or absence of pain locally and/or radiating into an extremity or extremities.
- This and subsequent categories also include the presence or absence of reflex and/or sensory losses.
- This and subsequent categories also include objectively demonstrable herniation of a cervical intervertebral disc with or without discectomy and/or fusion, if present.

Category 3. Mild cervico-dorsal impairment, with objective clinical findings of such impairment, with neck rigidity substantiated by x-ray findings of loss of anterior curve, narrowed intervertebral disc spaces and/or arthritic lipping of vertebral margins, with significant objective findings of mild nerve root involvement..

- This and subsequent categories include the presence or absence of any neurological deficits not otherwise specified in these categories with the exception of bladder and/or bowel sphincter impairments.

Category 4. Moderate cervico-dorsal impairment, with objective clinical findings of such impairment, with neck rigidity substantiated by x-ray findings of loss of anterior curve, narrowed intervertebral disc spaces and/or arthritic lipping of vertebral margins, with objective findings of moderate nerve root involvement with weakness and numbness in one or both upper extremities.

Category 5. Marked cervico-dorsal impairment, with marked objective clinical findings of such impairment, with neck rigidity substantiated by x-ray findings of loss of anterior curve, narrowed intervertebral disc spaces and/or arthritic lipping of vertebral margins, with objective findings of marked nerve root involvement with weakness and numbness in one or both upper extremities.

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Exercise # 1 (MEH #3)

A 55 year old woman has chronic neck pain with radiation to the right arm associated with:

- weakness (3/5) of her biceps and deltoid on the right,
- 2.2 cm muscle atrophy in the right upper arm, and
- decreased right biceps reflex.
- foramina compression test positive on the right with radicular pain.
- active neck extension and flexion markedly restricted.
- moderate palpable and visible cervical spasms .

Cervical spine films revealed 50% loss of disc height at C4-C5 and C5-C6 with hypermobility of 3.5 mm at C4-C5 on flexion and extension.

She has had no cervical surgery. EMG several months before showed evidence of a chronic, right-sided C5 radiculopathy.

Categories (WAC 296-20-240)

Choose the category below which best describes the patient's impairment:

- **Category 3.** Mild cervico-dorsal impairment, with objective clinical findings of such impairment, with neck rigidity substantiated by x-ray findings of loss of anterior curve, narrowed intervertebral disc spaces and/or arthritic lipping of vertebral margins, with significant objective findings of mild nerve root involvement..
- This and subsequent categories include the presence or absence of any neurological deficits not otherwise specified in these categories with the exception of bladder and/or bowel sphincter impairments.
- **Category 4.** Moderate cervico-dorsal impairment, with objective clinical findings of such impairment, **with neck** rigidity substantiated by x-ray findings of loss of anterior curve, narrowed intervertebral disc spaces and/or arthritic lipping of vertebral margins, with objective findings of moderate nerve root involvement with weakness and numbness in one or both upper extremities.

Exercise # 2 (MEH #7)

A 51 year old shuttle driver injured his neck when rear-ended at the airport.

He reported left hand tingling, numbness and weakness.

Initial exam revealed:

- cervical rigidity and spasms
- left C5 sensory/motor changes.

MRI revealed disc protrusion at C4-5 with left C5 nerve root impingement.

Treatment was discectomy/fusion at C4-5 followed by extensive physical therapy for 6 months.

•Current exam revealed:

- Slightly limited cervical ROM
- no spasms
- normal neurological functions

EMG revealed persistent C5 radiculopathy.

- **Category 1.** No objective clinical findings. Subjective complaints may be present or absent.
-
- **Category 2.** Mild cervico-dorsal impairment, with objective clinical findings of such impairment with neck rigidity substantiated by x-ray findings of loss of anterior curve, without significant objective neurological findings.
 - This and subsequent categories include the presence or absence of pain locally and/or radiating into an extremity or extremities.
 - This and subsequent categories also include:
 - the presence or absence of reflex and/or sensory losses.
 - objectively demonstrable herniation of a cervical intervertebral disc with or without discectomy and/or fusion, if present.
- **Category 3.** Mild cervico-dorsal impairment, with objective clinical findings of such impairment, with neck rigidity substantiated by x-ray findings of loss of anterior curve, narrowed intervertebral disc spaces and/or arthritic lipping of vertebral margins, with significant objective findings of mild nerve root involvement..
 - This and subsequent categories include the presence or absence of any neurological deficits not otherwise specified in these categories with the exception of bladder and/or bowel sphincter impairments.

Exercise # 3 (MEH #1)

A 45 year old insurance salesman has a 6 month history of neck pain, bilateral arm pain, and numbness of the thumb and index finger on the right.

Exam findings:

- no weakness of specific muscle groups
- reflexes 1+ and symmetrical in the upper extremities.
- foramina compression test positive for neck pain, but no radicular pain on either side.
- Cervical range of motion 30 degrees on right rotation (80 degrees to the left), and 10 degrees on right lateral flexion (30 degrees to the left).
- decreased sensation to pinprick in the C6 dermatome.
- Moderate palpable and visible cervical spasms

Cervical spine film showed :

- loss of cervical lordosis
- normal disc heights and
- no significant spurring or osteophyte formation.

- **Category 1.** No objective clinical findings. Subjective complaints may be present or absent.
- **Category 2.** Mild cervico-dorsal impairment, with objective clinical findings of such impairment with neck rigidity substantiated by x-ray findings of loss of anterior curve, without significant objective neurological findings.
 - This and subsequent categories include the presence or absence of pain locally and/or radiating into an extremity or extremities.
 - This and subsequent categories also include:
 - the presence or absence of reflex and/or sensory losses.
 - objectively demonstrable herniation of a cervical intervertebral disc with or without discectomy and/or fusion, if present.
- **Category 3.** Mild cervico-dorsal impairment, with objective clinical findings of such impairment, with neck rigidity substantiated by x-ray findings of loss of anterior curve, narrowed intervertebral disc spaces and/or arthritic lipping of vertebral margins, with significant objective findings of mild nerve root involvement..
 - This and subsequent categories include the presence or absence of any neurological deficits not otherwise specified in these categories with the exception of bladder and/or bowel sphincter impairments.

Exercise # 4 (MEH #6)

A 45-year-old landscaper experienced an injury to the neck. Treatment was conservative and he is now at MMI. His subjective complaints consist of ongoing neck and right arm pain.

Examination revealed:

- positive foramina compression test for radicular pain
- diminished right biceps reflex compared to the left
- no muscle weakness or atrophy
- hypesthesia in a C6 distribution
- active cervical flexion limited to 30 degrees
- mild to moderate palpable and visible spasm
- x-rays show a 25% loss of disc height at C5-C6 with some anterior spurring at multiple levels in the cervical spine.

Category 1. No objective clinical findings. Subjective complaints may be present or absent.

Category 2. Mild cervico-dorsal impairment, with objective clinical findings of such impairment with neck rigidity substantiated by x-ray findings of loss of anterior curve, without significant objective neurological findings.

- This and subsequent categories include the presence or absence of pain locally and/or radiating into an extremity or extremities.
- This and subsequent categories also include:
- the presence or absence of reflex and/or sensory losses.
- This and subsequent categories also include objectively demonstrable herniation of a cervical intervertebral disc with or without discectomy and/or fusion, if present.

Category 3. Mild cervico-dorsal impairment, with objective clinical findings of such impairment, with neck rigidity substantiated by x-ray findings of loss of anterior curve, narrowed intervertebral disc spaces and/or arthritic lipping of vertebral margins, with significant objective findings of mild nerve root involvement..

- This and subsequent categories include the presence or absence of any neurological deficits not otherwise specified in these categories with the exception of bladder and/or bowel sphincter impairments.



Rating cervical spine impairment

- There are a total of seven case examples in the Medical Examiner's Handbook.
- We encourage you to do all of them to further develop your skill in rating the cervical spine using the Category Rating System.
- The answers to all of the case examples are listed after the last case.



Worksheet overview

- Caution regarding **severe** impairments.
(for example “marked” atrophy and muscle weakness, paraplegia, and quadriplegia)
- Caution regarding **preexisting** conditions.
- The worksheet should be used in conjunction with the WACs.

Doctor's Worksheet for Rating Cervical and Cervico-Dorsal Impairment

Example

Mr. Y, a 45 year old male, has a six-month history of neck pain with parathesias globally from the elbow distally in the left upper extremity. Treatment included physical therapy and epidural steroid injections. Reflex, sensation and motor exams were within normal limits. Foramina compression test was positive on the left. Cervical range-of-motion was within normal limits. MRI showed mild circumferential disc bulges at C 5-6 and C 6-7. X-rays showed reversal of the cervical lordotic curve.

A	B	C
Nerve Root Involvement <i>(See Notes below.)</i>	Neck Rigidity Substantiated by Imaging <i>(Only include findings which are consistent with the clinical picture. Age related changes may not be significant in some cases --- see Notes.)</i>	Range-of-Motion, Spasm, and Other Findings <i>(Describe briefly in space below-- see Notes.)</i>
Circle one	Circle one	Circle one
none (1)	none (1)	none (1)
Decrease in reflexes; mild sensory loss; and/or root tension and compression signs (e.g., foramina compression test, etc.) (2)	Loss of anterior curve; and/or herniation at one level (2)	Mild (2)
		Moderate (3)
Mild weakness and sensory loss in one or both extremities (3)	Mildly narrowed disc spaces; mild osteoarthritic lipping of vertebral margins; herniation at more than one level; and/or findings from discectomy or fusion (one level) indicative of significant neck rigidity. (3)	Marked (4)
		Describe ROM, spasm, etc. here:
Moderate distal weakness and sensory loss in one or both upper extremities. (4)	Moderately narrowed disc spaces; moderate lipping of vertebral margins; and/or findings from discectomy or fusion (more than one level) indicative of significant neck rigidity. (4)	Normal ROM
Marked distal weakness; moderate or marked proximal weakness; and marked sensory loss in one or both extremities (5)	Markedly narrowed disc spaces and/or osteoarthritic lipping (5)	

Step 4: Calculate Rating *(If you want L&I to do the*

(4)	fusion (more than one level) indicative of significant neck rigidity. (4)	-----
Marked distal weakness; moderate or marked proximal weakness; and marked sensory loss in one or both extremities (5)	Markedly narrowed disc spaces and/or osteoarthritic lipping (5)	

Step 4: Calculate Rating (If you want L&I to do the calculation, copy the numbers into the 1st 3 boxes and go to Step 5.)

NOTES:

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Column A: **Mild Weakness** = 4/5 (Complete motion against gravity and less than full resistance);
Moderate = 3/5 (Barely complete motion against gravity);
Marked = 2/5 - 0/5 (Complete motion with gravity eliminated to no evidence of contractility).
 If lower extremities are involved (e.g., paraparesis), consult the *Medical Examiners' Handbook*.

Column C: Only include findings which are consistent with the clinical picture. **NOT TO BE CONSIDERED: OSWESTRY OR OTHER PAIN SCALES.** Pain is considered in the rating, but must be reflected in findings described on this worksheet (for example, decreased range of motion). Bladder and bowel sphincter impairment should be rated separately.

Box number circled in Column A:	2
Box number circled in Column B:	1
Box number circled in Column C:	1
Total	4
Average (total divided by 3)	1 1/3
Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.) This is the rating:	1

Step 5: Certification	I certify that I have examined the patient within the last 8 weeks and that the above report truly and correctly sets forth my findings and opinion.		
	Doctor's address	ZIP+4	Provider No.
	123 Maple Dr. Seattle, WA 98xxx-xxxx		12345
	Print Dr's name	Today's date	Doctor's signature
John Smith M.D.	3/1/05	<i>John Smith M.D.</i>	

The Physician should photocopy this worksheet for their medical records. Doctors should refer to the Medical Examiner's Handbook for instructions on the use of this worksheet.



Guidelines for cervical and cervical-dorsal impairment

- Use of these guidelines is **not** required. They are intended to offer guidance.
- This section attempts to give better definition and clarity to the terms “mild but significant”, “moderate”, and “marked”.



Cervical and cervical-dorsal impairment worksheet

In all sections of the guidelines, only consider findings that are consistent with the clinical picture.

Guidelines for:

1. Atrophy
2. EMG abnormalities
3. Muscle weakness
4. Reflex loss
5. X-ray or imaging findings
6. Misc. findings



Atrophy

- For the arm or forearm, a difference in circumference of:
- 1-1.9 cm. = **mild**
- 2-2.9 cm. = **moderate**
- 3+ cm. = **marked**
- Atrophy should not be considered in the rating if it can be explained by non-spine related problems or contralateral hypertrophy, as might occur with a dominant limb or greater increased use of a limb..



EMG abnormalities

- EMG abnormalities are considered significant if unequivocal electrodiagnostic evidence exists of acute nerve root compromise, such as:
 - multiple positive sharp waves or fibrillation potentials; or
 - H-wave absence or delay greater than 3 mm/sec; or
 - chronic changes such as polyphasic waves in peripheral muscles.



Muscle weakness

- **Mild** = 4/5 (Complete motion against gravity and less than full resistance);
- **Moderate** = 3/5 (Barely complete motion against gravity);
- **Marked** = 2/5 – 0/5 (Complete motion with gravity eliminated, to no evidence of contractility)



Reflex loss

- In general, only asymmetric reflex losses should be considered significant for the purposes of impairment rating.



X-ray or imaging findings

- The following categorization is **NOT** intended to be a comprehensive list of findings which may be described as mild, moderate, or marked.
- **Be sure to only include findings which are consistent with the clinical picture.**



Mild	Moderate	Marked
<p>Any of the following without hypermobility or radiculopathy:</p> <ul style="list-style-type: none">• spondylolysis• spondylolisthesis• vertebral body fracture with less than 25% compression of one vertebral body• post-surgical state	<ul style="list-style-type: none">• hypermobility or translation >3.5 mm at a single level• vertebral body fracture with 25-50% compression of one vertebral body	<ul style="list-style-type: none">• hypermobility or translation > 3.5 mm at multiple levels• vertebral body fracture with > 50% compression of one vertebral body



Other imaging findings

- Disc bulges or degenerative changes in the absence of concurrent clinical presentation should be considered insignificant.
- Disc narrowing, spurring, and arthrosis are part of the aging process and **may** be considered insignificant depending on the circumstances of the individual patient.
- However, principles pertaining to preexisting conditions must be considered. (Refer to the MEH, Preexisting Conditions and Segregation).



Miscellaneous findings

- The list below is NOT intended to be a comprehensive list of findings which may be considered for the purposes of impairment rating.
- **Again, be sure to only include findings which are consistent with the clinical picture.**



These MAY be considered in an impairment rating:

- Dermatomal sensory loss
- Muscle guarding
- Asymmetric loss of active range-of-motion
- Foraminal compression test. i.e., upper extremity symptoms in a radicular pattern (Spurling's maneuver)



These should not be considered in an impairment rating:

- Pain scales (for example, the Oswestry pain scale)

Example (MEH page 66)

- A 45 year old male with a 6 month history of neck pain with paresthesias globally from the elbow distally in the left upper extremity. Treatment has been physical therapy and epidural steroid injections.
- On his current exam:
- Reflex, sensation and motor exams were within normal limits.
- Foramina compression test was positive for radicular pain on the left.
- Cervical range of motion was within normal limits.
- MRI showed mild circumferential disc bulges at C 5-6 and C 6-7.
- X-rays showed reversal of the cervical lordosis.

Department of Labor and Industries Doctor's Worksheet for Rating Cervical and Cervico-Dorsal Impairment

Claimant's name _____ Claim # _____

Step 1: (a) Has the worker's condition reached maximum medical improvement? Yes No If no, do not rate. Please provide treatment recommendations.
 (b) If there is a pre-existing condition, was it permanently aggravated by the industrial injury? Yes No If yes, attach explanation.

Step 2: Is there any permanent impairment? Yes No

Step 3: Circle one box in each column A through C below. Give brief explanation below (REQUIRED). Your entries should reflect the patient's current condition, as is including findings which may pre-date the injury. (See examples on page 2 of this worksheet)

A	B	C
Nerve Root Involvement (See Notes below.)	Neck Rigidity Substantiated by Imaging (Only include findings which are consistent with the clinical picture. Age related changes may not be significant in some cases --- see Notes.)	Range-of-Motion, Spasm, and Other Findings (Describe briefly in space below-- see Notes.)
Circle one none (1)	Circle one none (1)	Circle one none (1)
Decrease in reflexes; mild sensory loss; and/or root tension and compression signs (e.g., foramina compression test, etc.) (2)	Loss of anterior curve; and/or herniation at one level (2)	Mild (2)
Mild weakness and sensory loss in one or both extremities (3)	Mildly narrowed disc spaces; mild osteoarthritic lipping of vertebral margins; herniation at more than one level; and/or findings from discectomy or fusion (one level) indicative of significant neck rigidity. (3)	Moderate (3)
Moderate distal weakness and sensory loss in one or both upper extremities. (4)	Moderately narrowed disc spaces; moderate lipping of vertebral margins; and/or findings from discectomy or fusion (more than one level) indicative of significant neck rigidity. (4)	Marked (4)
Marked distal weakness; moderate or marked proximal weakness; and marked sensory loss in one or both extremities (5)	Markedly narrowed disc spaces and/or osteoarthritic lipping (5)	Describe ROM, spasm, etc. here:

Step 4: Calculate Rating (If you want L&I to do the calculation, copy the numbers into the 1st 3 boxes and go to Step 5.)

NOTES:

Column A: **Mild Weakness** = 4/5 (Complete motion against gravity and less than full resistance);
Moderate = 3/5 (Barely complete motion against gravity);
Marked = 2/5 - 0/5 (Complete motion with gravity eliminated to no evidence of contractility).
 If lower extremities are involved (e.g., paraparesis), consult the *Medical Examiners' Handbook*.

Column C: Only include findings which are consistent with the clinical picture. **NOT TO BE CONSIDERED: OSWESTRY OR OTHER PAIN SCALES.** Pain is considered in the rating, but must be reflected in findings described on this worksheet (for example, decreased range of motion). Bladder and bowel sphincter impairment should be rated separately.

Box number circled in Column A:	
Box number circled in Column B:	
Box number circled in Column C:	
Total	
Average (total divided by 3)	
Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.) This is the rating:	

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Step 5: Certification	I certify that I have examined the patient within the last 8 weeks and that the above report truly and correctly sets forth my findings and opinion.		
	Doctor's address	ZIP+4	Provider No.
	Print Dr's name	Today's date	Doctor's signature

The Physician should photocopy this worksheet for their medical records. Doctors should refer to the *Medical Examiner's Handbook* for instructions on the use of this worksheet.

Exercise # 1 (MEH #3)

A 55 year old woman has chronic neck pain with radiation to the right arm associated with:

- weakness (3/5) of her biceps and deltoid on the right,
- 2.2 cm muscle atrophy in the right upper arm, and
- decreased right biceps reflex.
- foramina compression test positive on the right with radicular pain.
- active neck extension and flexion markedly restricted.
- moderate palpable and visible cervical spasms .

Cervical spine films revealed 50% loss of disc height at C4-C5 and C5-C6 with hypermobility of 3.5 mm at C4-C5 on flexion and extension.

She has had no cervical surgery.

EMG several months before showed evidence of a chronic, right-sided C5 radiculopathy.

Department of Labor and Industries Doctor's Worksheet for Rating Cervical and Cervico-Dorsal Impairment

Claimant's name

Claim #

Step 1: (a) Has the worker's condition reached maximum medical improvement? Yes No If no, do not rate. Please provide treatment recommendations.
(b) If there is a pre-existing condition, was it permanently aggravated by the industrial injury? Yes No If yes, attach explanation.

Step 2: Is there any permanent impairment? Yes No

Step 3: Circle one box in each column A through C below. Give brief explanation below (REQUIRED). Your entries should reflect the patient's current condition, as is including findings which may pre-date the injury. (See examples on page 2 of this worksheet)

A	B	C
Nerve Root Involvement (See Notes below.)	Neck Rigidity Substantiated by Imaging (Only include findings which are consistent with the clinical picture. Age related changes may not be significant in some cases --- see Notes.)	Range-of-Motion, Spasm, and Other Findings (Describe briefly in space below-- see Notes.)
Circle one none (1)	Circle one none (1)	Circle one none (1)
Decrease in reflexes; mild sensory loss; and/or root tension and compression signs (e.g., foramina compression test, etc.) (2)	Loss of anterior curve; and/or herniation at one level (2)	Mild (2)
Mild weakness and sensory loss in one or both extremities (3)	Mildly narrowed disc spaces; mild osteoarthritic lipping of vertebral margins; herniation at more than one level; and/or findings from discectomy or fusion (one level) indicative of significant neck rigidity. (3)	Moderate (3)
Moderate distal weakness and sensory loss in one or both upper extremities. (4)	Moderately narrowed disc spaces; moderate lipping of vertebral margins; and/or findings from discectomy or fusion (more than one level) indicative of significant neck rigidity. (4)	Marked (4)
Marked distal weakness; moderate or marked proximal weakness; and marked sensory loss in one or both extremities (5)	Markedly narrowed disc spaces and/or osteoarthritic lipping (5)	Describe ROM, spasm, etc. here:

Step 4: Calculate Rating (If you want L&I to do the calculation, copy the numbers into the 1st 3 boxes and go to Step 5.)

NOTES:

Column A: **Mild Weakness** = 4/5 (Complete motion against gravity and less than full resistance);
Moderate = 3/5 (Barely complete motion against gravity);
Marked = 2/5 - 0/5 (Complete motion with gravity eliminated to no evidence of contractility).
If lower extremities are involved (e.g., paraparesis), consult the *Medical Examiners' Handbook*.

Column C: Only include findings which are consistent with the clinical picture. NOT TO BE CONSIDERED: OSWESTRY OR OTHER PAIN SCALES. Pain is considered in the rating, but must be reflected in findings described on this worksheet (for example, decreased range of motion). Bladder and bowel sphincter impairment should be rated separately.

Box number circled in Column A:	
Box number circled in Column B:	
Box number circled in Column C:	
Total	
Average (total divided by 3)	
Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.) This is the rating:	

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Step 5: Certification	I certify that I have examined the patient within the last 8 weeks and that the above report truly and correctly sets forth my findings and opinion.		
	Doctor's address	ZIP+4	Provider No.
	Print Dr's name	Today's date	Doctor's signature

The Physician should photocopy this worksheet for their medical records. Doctors should refer to the Medical Examiner's Handbook for instructions on the use of this worksheet.

Exercise # 2 (MEH #7)

A 51 year old shuttle driver injured his neck when rear-ended at the airport.

He reported left hand tingling, numbness and weakness.

Initial exam revealed:

- cervical rigidity and spasms
- left C5 sensory/motor changes.

MRI revealed disc protrusion at C4-5 with left C5 nerve root impingement.

Treatment was discectomy/fusion at C4-5 followed by extensive physical therapy for 6 months.

- Current exam revealed:
- Slightly limited cervical ROM
- no spasms
- normal neurological functions

EMG revealed persistent C5 radiculopathy.

Department of Labor and Industries Doctor's Worksheet for Rating Cervical and Cervico-Dorsal Impairment

Claimant's name _____ Claim # _____

Step 1: (a) Has the worker's condition reached maximum medical improvement? Yes No If no, do not rate. Please provide treatment recommendations.
 (b) If there is a pre-existing condition, was it permanently aggravated by the industrial injury? Yes No If yes, attach explanation.

Step 2: Is there any permanent impairment? Yes No

Step 3: Circle one box in each column A through C below. Give brief explanation below (REQUIRED). Your entries should reflect the patient's current condition, as is including findings which may pre-date the injury. (See examples on page 2 of this worksheet)

A Nerve Root Involvement (See Notes below.)	B Neck Rigidity Substantiated by Imaging (Only include findings which are consistent with the clinical picture. Age related changes may not be significant in some cases --- see Notes.)	C Range-of-Motion, Spasm, and Other Findings (Describe briefly in space below-- see Notes.)
Circle one none (1)	Circle one none (1)	Circle one none (1)
Decrease in reflexes; mild sensory loss; and/or root tension and compression signs (e.g., foramina compression test, etc.) (2)	Loss of anterior curve; and/or herniation at one level (2)	Mild (2)
Mild weakness and sensory loss in one or both extremities (3)	Mildly narrowed disc spaces; mild osteoarthritic lipping of vertebral margins; herniation at more than one level; and/or findings from discectomy or fusion (one level) indicative of significant neck rigidity. (3)	Moderate (3)
Moderate distal weakness and sensory loss in one or both upper extremities. (4)	Moderately narrowed disc spaces; moderate lipping of vertebral margins; and/or findings from discectomy or fusion (more than one level) indicative of significant neck rigidity. (4)	Marked (4) Describe ROM, spasm, etc. here:
Marked distal weakness; moderate or marked proximal weakness; and marked sensory loss in one or both extremities (5)	Markedly narrowed disc spaces and/or osteoarthritic lipping (5)	

Step 4: Calculate Rating (If you want L&I to do the calculation, copy the numbers into the 1st 3 boxes and go to Step 5.)

Box number circled in Column A:	
Box number circled in Column B:	
Box number circled in Column C:	
Total	
Average (total divided by 3)	
Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.) This is the rating:	

NOTES:

Column A: **Mild Weakness** = 4/5 (Complete motion against gravity and less than full resistance);
Moderate = 3/5 (Barely complete motion against gravity);
Marked = 2/5 - 0/5 (Complete motion with gravity eliminated to no evidence of contractility).
 If lower extremities are involved (e.g., paraparesis), consult the *Medical Examiners' Handbook*.

Column C: Only include findings which are consistent with the clinical picture. NOT TO BE CONSIDERED: OSWESTRY OR OTHER PAIN SCALES. Pain is considered in the rating, but must be reflected in findings described on this worksheet (for example, decreased range of motion). Bladder and bowel sphincter impairment should be rated separately.

Section
V

Step 5: Certification	I certify that I have examined the patient within the last 8 weeks and that the above report truly and correctly sets forth my findings and opinion.		
	Doctor's address	ZIP+4	Provider No.
	Print Dr's name	Today's date	Doctor's signature

The Physician should photocopy this worksheet for their medical records. Doctors should refer to the Medical Examiner's Handbook for instructions on the use of this worksheet.

Exercise # 3 (MEH #1)

A 45 year old insurance salesman has a 6 month history of neck pain, bilateral arm pain, and numbness of the thumb and index finger on the right.

Exam findings:

- no weakness of specific muscle groups
- reflexes 1+ and symmetrical in the upper extremities.
- foramina compression test positive for neck pain, but no radicular pain on either side.
- Cervical range of motion 30 degrees on right rotation (80 degrees to the left), and 10 degrees on right lateral flexion (30 degrees to the left).
- decreased sensation to pinprick in the C6 dermatome.

• Moderate palpable and visible cervical spasms

Cervical spine film showed :

- loss of cervical lordosis
- normal disc heights and
- no significant spurring or osteophyte formation.

Department of Labor and Industries Doctor's Worksheet for Rating Cervical and Cervico-Dorsal Impairment

Claimant's name _____ Claim # _____

Step 1: (a) Has the worker's condition reached maximum medical improvement? Yes No If no, do not rate. Please provide treatment recommendations.
 (b) If there is a pre-existing condition, was it permanently aggravated by the industrial injury? Yes No If yes, attach explanation.

Step 2: Is there any permanent impairment? Yes No

Step 3: Circle one box in each column A through C below. Give brief explanation below (REQUIRED). Your entries should reflect the patient's current condition, as is including findings which may pre-date the injury. (See examples on page 2 of this worksheet)

A Nerve Root Involvement (See Notes below.)	B Neck Rigidity Substantiated by Imaging (Only include findings which are consistent with the clinical picture. Age related changes may not be significant in some cases --- see Notes.)	C Range-of-Motion, Spasm, and Other Findings (Describe briefly in space below-- see Notes.)
Circle one none (1)	Circle one none (1)	Circle one none (1)
Decrease in reflexes; mild sensory loss; and/or root tension and compression signs (e.g., foramina compression test, etc.) (2)	Loss of anterior curve; and/or herniation at one level (2)	Mild (2)
Mild weakness and sensory loss in one or both extremities (3)	Mildly narrowed disc spaces; mild osteoarthritic lipping of vertebral margins; herniation at more than one level; and/or findings from discectomy or fusion (one level) indicative of significant neck rigidity. (3)	Moderate (3)
Moderate distal weakness and sensory loss in one or both upper extremities. (4)	Moderately narrowed disc spaces; moderate lipping of vertebral margins; and/or findings from discectomy or fusion (more than one level) indicative of significant neck rigidity. (4)	Marked (4)
Marked distal weakness; moderate or marked proximal weakness; and marked sensory loss in one or both extremities (5)	Markedly narrowed disc spaces and/or osteoarthritic lipping (5)	Describe ROM, spasm, etc. here:

Step 4: Calculate Rating (If you want L&I to do the calculation, copy the numbers into the 1st 3 boxes and go to Step 5.)

NOTES:

Column A: **Mild Weakness** = 4/5 (Complete motion against gravity and less than full resistance);
Moderate = 3/5 (Barely complete motion against gravity);
Marked = 2/5 - 0/5 (Complete motion with gravity eliminated to no evidence of contractility).
 If lower extremities are involved (e.g., paraparesis), consult the *Medical Examiners' Handbook*.

Column C: Only include findings which are consistent with the clinical picture. **NOT TO BE CONSIDERED: OSWESTRY OR OTHER PAIN SCALES.** Pain is considered in the rating, but must be reflected in findings described on this worksheet (for example, decreased range of motion). Bladder and bowel sphincter impairment should be rated separately.

Box number circled in Column A:	
Box number circled in Column B:	
Box number circled in Column C:	
Total	
Average (total divided by 3)	
Enter the average rounded to nearest whole number (1.1=1, 1.5=2, etc.) This is the rating:	

Section **V**

Step 5: Certification	I certify that I have examined the patient within the last 8 weeks and that the above report truly and correctly sets forth my findings and opinion.		
	Doctor's address	ZIP+4	Provider No.
	Print Dr's name	Today's date	Doctor's signature

The Physician should photocopy this worksheet for their medical records. Doctors should refer to the Medical Examiner's Handbook for instructions on the use of this worksheet.



Rating cervical spine impairment

- There are a total of seven cervical case examples in the MEH.
- We would encourage you to do all the case examples to further develop your skill in using the worksheet to rate the lumbar spine.
- The answers to all the case examples are listed after the last case.



Dorsal Spine Impairment

- Dorsal/Cervical And Dorsal/Lumbar Combinations (MEH page 74)
- WAC 296-20-250
- WAC 296-20-260



Dorsal spine impairment

- **CAUTION:** This would only be used if there was SOLELY a dorsal spine pathology.
- If there were also cervical or lumbar spine pathology, this rating would not be used. in these cases you would use the cervico-dorsal or dorso-lumbar ratings.



IMPAIRMENTS TO THE PELVIS (MEH page 88)

- WAC 296-20-290
- WAC 296-20-300

THANK YOU

