

**Consistency of AMA Impairment Evaluation & Reporting:
Part III: Cervical Thoracic & Lumbar Segments of The Spine**

By: Luis Perez-Cordero & Craig Andrew Lange

Calculating & Reporting California Impairment & The AMA Guides: ^{1,2,3}

A California Permanent Disability Rating starts with the evaluating physician's impairment rating in accordance with the medical evaluation protocols and rating procedures set forth in the 5th Edition of the AMA Guides. This initial component is then 'adjusted' into a permanent disability rating to account for diminished future earning capacity and the occupation and age of the injured employee at the time of the injury. These components of the rating formula are found in the Schedule for Rating Permanent Disabilities (PDRS).

Chapters 3 to 17 of the AMA Guides outline how imaging studies, signs and appropriate test results support the use of not only Diagnosis Related/Based Estimates (DRE) or (DBE) but of the distinct percentages for objective manifestations of impairment. Yes, the AMA Guides emphasize impairment ratings based on objective assessment as well as considers subjective symptoms within the diagnostic criteria and support of an impairment percentage. Chapter 18 specifically deals with situations above and beyond the effects of pain on Activities of Daily Living (ADL).

The fragmentation into 18 Chapters, of impairment calculating rating criteria, might lead some users to believe that there are no common rating principles applicable to any and all disabilities. Principles for determining impairment values for ROM, DRE, DBE and the avoidance of duplication appear recurrently from chapter to chapter. Rating principles previously found in the 97PDRS, i.e., interpolation, rounding, avoidance of duplication/pyramiding, combination of disabilities, etc. are first addressed in Chapters 1 and 2. Chapters 3 to 17 build on this foundation and expand these principles as related to the specific body parts or organ systems. For both the upper and lower extremities, the AMA Guides carries the concept of prior PD Schedules: that impairment manifestations cannot exceed the value of amputation. Section 7 of the 05PDRS provides examples and strengthens the concept in the description of the proper determination of California impairment-to-disability.

One thing is very clear by the requirements of both the AMA Guides & California Code of Regulations - Evaluating Physician must explain how the impairment was calculated. Attaching a computer generated report and/or worksheet does not replace the California requirement that the determination of any impairment level must follow the AMA Guides established evaluation criterion and be explained by a well-reasoned/rational medical opinion.

It is not acceptable to calculate impairment using 'pre-programmed' estimated values defined by population averages without any regards to what is normal for the individual or the reasons for the ROM limitations.

Evaluating Physician must not fail to discuss how specific findings relate to and compare with the applicable rating criteria used to determine impairment - especially how impairment is determined with missing and/or limited data. AMA 5th Ed., Section 2.6b, page 22.

Imaging study findings and unsupported subjective/pain complaints are worthless without a clinical correlation at the time of examination. Symptoms and complaints without integration to objective data (by the evaluating physician) should not serve as the sole criterion upon which decisions about impairment are made. General guidelines for the description and correlation of any imaging or diagnostic can be found on AMA 5th Ed., page 378.

AMA Guidance for addressing the issues of causation, aggravation and apportionment, which should be considered if the vocational causation is responsible for an aggravation of symptoms, are found in AMA pages 10, 11 and 12. Physician must also be aware of SB 899 apportionment requirements.

The P&S report must show that the evaluating physician has considered avocational factors, findings and symptomatology independent of the permanent disability due to vocational causation. The evaluating physician provides a well-reasoned opinion based on the review of the medical records/history and considers pre-existing objective pathology, symptomatology, work limitations secondary to pre-existing disability, including time off from work or need for treatment.

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Many of the AMA Guides concepts are not new to California Workers Compensation. Both the Labor Code, The California Code of Regulations and a multitude of cases have defined basic concepts, which continue to help us understand the standards of what constitutes substantial medical evidence in a California P&S medical report.

Pain Add-On to Spinal Impairments

A whole person impairment rating based on the body or organ rating system of the AMA Guides (Chapters 3 through 17) may be increased by up to 03% WPI if the burden of the worker's condition increases by pain-related impairment in excess of the pain component already incorporated in the WPI rating in Chapters 3 to 17. AMA 5th Ed., page 573 & 2005 PDRS, page 1-12.

Can pain (01-03% WPI) be added to the maximum ranges of a DRE Category? This appears to be an area of dispute, even among the 'experts' of the AMA Guides. But the answer can be found by the use of both The 5th Edition of AMA Guides and The Schedule for Rating Permanent Disabilities (05PDRS). Dr. Linda Cocchiarella's AMA Guides companion Master the AMA Guides helps clarify the matter even further.

2005 PDRS, page 1-12: *"A whole person impairment rating based on the body or organ rating system of the AMA Guides (Chapter 3 through 17) may be increased by up to 03% WPI if the burden of the worker's condition has been increased by pain-related impairment in excess of the pain component already incorporated in the WPI rating in Chapters 3-17."*

I. AMA 5th Ed., Section 18.3d, page 573: How To Rate Pain-Related Impairment

This chapter (18) relies largely on self-reports by individuals. Thus, it differs significantly from the conventional rating system, which relies primarily on objective indices of organ dysfunction or failure (Chapters 3 to 17). The system assesses pain intensity; emotional distress related to pain, and ADL deficits secondary to pain. **ADL deficits are given the greatest weight.** An individual's pain-related impairment is considered un-ratable if (a) behavior during the evaluation raises significant issues of credibility, (b) clinical findings are atypical of a well-accepted medical condition, or (c) the diagnosis is for a condition that is vague or controversial. (Refer to the Algorithm for Rating Pain- Figure 18-1.)

A. First, physician evaluates the individual according to the body or organ rating system, and determines an impairment percentage. During the evaluation, the examiner also assesses pain-related impairment.

B. If the body system impairment rating appears to adequately encompass the pain experienced by the individual due to his or her medical condition, his or her impairment rating is as indicated by the body system impairment rating.

C. If the individual appears to have pain-related impairment that has increased the burden of his or her condition *slightly*, the examiner may increase the percentage found in A by up to 3%.

1. For example, physician places a worker on Lumbar Spine Category III and determines that based on the severity of both measurable and clinical findings, a 12% best reflects his conventional impairment. Pain and discomfort were not considered as part of this initial determination. Now, physician considers the impact of pain on ADL and determines that an additional 02WPI best reflects the impact of pain on physical activities of daily living. The 02 is added (not combined) to the 12 conventional impairment for a 14WPI that will then be adjusted by the 05PDRS modifiers of FEC, Occupation and Age.

D. The examiner should perform a formal pain-related impairment assessment if any of the following conditions are met:

1. The individual appears to have pain-related impairment that is *substantially* in excess of the impairment determined in step A or
2. The individual has a well-recognized medical condition that is characterized by pain in the absence of measurable dysfunction of an organ or body part (see Table 18-1 for examples) or

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3. The individual has a syndrome with the following characteristics: (a) it is associated with identifiable organ dysfunction that is ratable according to other chapters in the *Guides*; (b) it *may be* associated with a well-established pain syndrome, but the occurrence or non-occurrence of the pain syndrome is not predictable; so that (c) the impairment ratings provided in step A do not capture the added burden of illness borne by the individual because of his or her associated pain syndrome (see Table 18-2 for examples).

E. If the examiner performs a formal pain-related impairment rating, he or she may increase the percentage found in step A by up to 03%, and he or she should classify the individual's pain-related impairment into one of four categories: mild (00), moderate (01), moderately severe (02), or severe (03). In addition, the examiner should determine whether the pain-related impairment is *ratable* or *un-ratable*. Refer also to the 2nd paragraph on page 1-12 of the 05PDRS.

Evaluating physician must remember that as per the 2005 PDRS, the maximum allowance for pain resulting from a single injury is 03% regardless of the number of impairment resulting from that injury. If all 3 segments of the spine have been rated under DRE Categories, the physician doesn't add 03% per spinal segment. Only a maximum of 03% divided according to impact of pain on ADL is considered.

When considering adding pain impairment to a conventional rating, the conventional rating's components must not already incorporate pain (i.e., ROM causation is due to pain and not mechanical block) and the medical justification for the addition of pain must be clear and well reasoned, thus substantiating the non-duplication of impairment.

On page 204 of Master The AMA Guides, Dr. Cocchiarella provides insightful guidance for all evaluating physicians:

1. **Use the DRE method as the method of choice** [for rating spinal impairment].
2. When determining what end of the range to use, determine whether the condition and its impact on ADL is consistent with that condition, or if the impairment has led to worse functioning. If ADL are more severely impacted than expected for the condition, use the upper end of the scale.
3. **Document impairments that may have predated the injury and may have been aggravated as a result of the injury, e.g., spondylolysis, spondylolisthesis, and herniated disk without radiculopathy.**
4. **If pain is disproportionate for the condition, use the pain chapter for determining whether a qualitative and additional quantitative amount (1%-3%) should be combined with the DRE or ROM rating.**

II. Supporting Vocational Modifications, Work Limitations or Restrictions⁴

To determine if the employee's need for job modifications are truly based on an objective clinical foundation, the evaluating physician must analyze vocational task and provide an explanation of the impact of the medical impairment on vocational activities. **Any determination of need for job modifications or QIW status requires a demonstrable foundation of clinical signs or other independent measurable abnormalities.**

Emphasizing residual capacity over activity limitations, the physician determines the basis for any limitation of activities as supported by objective measurable and clinical information. Careful consideration must be given to the concepts of physical harm, current ability and perceived or actual tolerance for the inability to perform vocational activities. Physician should not lightly 'preclude' activities and functional loss not supported by an appropriate impairment level.

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Some questions to consider:

- **Risk (Harm):** **Q:** Do the work activities pose a 'substantial risk' of significant harm to self or others? **Risk is not an increase in previously present symptoms like pain or fatigue.**
- **Capacity – Current Ability:** **Q:** Is EE physically able to perform essential job functions? **Q:** Are current strength, flexibility & endurance levels up to capacity, or are current abilities reduced due to deconditioning?
- **Tolerance** - Ability to endure sustained work activities. **Q:** Able to do specific tasks? Variable comfort level? **Q:** If any, what psychophysiological factors are affecting the individual's ability to tolerate greater levels of subjective symptomatology?

Job modifications or vocational rehabilitation must be substantiated by realistic facts and findings suitably identified in the formulation of the reasoned/logical medical opinion. The word 'prophylactic' can no longer be the proper support for job restrictions or modifications.

The basis for job modifications or work restrictions is not and has never been complaints. Work Restrictions (Disability) describe the inability of an individual to perform a specific or group of activities because of objective clinical/measurable impairment factors.

- **Disability needs clinical corroboration and an objective base.**
- **Disability needs to consider risk from a clinical point of view; not from a subjective point of view, and Never because of the unfounded assertion of a prophylactic need.**
- Disability becomes disability after a physician conducts a complete examination and demonstrates by his application of medical-legal principles that a functional limit exists.
- Disability exists when an individual or others would be placed at risk due to the presence of objective measurable impairment. Life choices, deconditioning and 'comfort level' should never be the sole support for impairment/disability.

The use of the word prophylactic is and has never been objective evidence capable of proving/disproving or supporting impairment or disability. Its misuse has only served to disguise the lack of material findings [measurable objective & clinical] and in turn create the facade of 'reasonable medical probability' when the only support were unconfirmed assertions of disability [subjective complaints]. It's never been a valid reason, as required by WCAB § 10606 (f) (f) (i) (k) (m) (n), for the support of impairment, disability or work modifications.

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In a recent article the Honorable WCAB Judge Pamela W. Foust states:

California Evidence Code section 140 defines the term, evidence, as "testimony, writings, material objects, or other things presented to the senses that are offered to prove the existence or nonexistence of a fact." The phrase, substantial evidence, does not appear in the Evidence Code but definitions can be found in the case law. Probably the most widely accepted definition of substantial evidence is relevant evidence that a reasonable person might accept as adequate to support a conclusion.

Notwithstanding these considerations, substantial evidence is simply evidence that is believable. At the extreme ends of the spectrum, the concept will be easy to apply. If any reasonable person could read a medical report and find the doctor's conclusion to be persuasive, that's substantial evidence, assuming the report is based on accurate facts. On the other hand, if the doctor's opinion would insult the intelligence of any reasonable person or elicit the reaction that it could only happen this way on a cold day in hell, the report is not substantial evidence.

- LC§ 4620 – Medical Legal Report must be capable of proving/disproving a disputed medical fact. In determining whether a report meets the requirements of the subdivision, a WCAB Judge shall give full consideration to the substance, as well as form of the report as required by applicable statues and regulations.

*"A worker's compensation judge's determination based on a medical report that is just a string of unsubstantiated conclusions is no better than judicial dart-throwing. For the medical report to be usable, it should clearly explain how the medical conclusions are reached and in a way that someone who is not a medical expert can understand." – **Honorable Alan Eskenazi, WC Judge.***

*"Where the physician addresses the disputed medical facts, applies the case facts, applies his expertise, and renders a rational opinion, then the expert medical opinion has 'probative value' to assist the court to resolve disputed issues." - **Honorable W. Ordas & N S Udkovick, WC Judges***

- 8 CCR § 10606 - The medical report must be clear as to any loss of work capacity, be it objective physical findings, disabling effects of pain, work restrictions or a percentage of pre-injury capacity functional loss. If there is no residual impairment (disability) the report should state so.

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- 8 CCR § 9793 (c) – “Comprehensive Medical-Legal Evaluation” means an evaluation of an employee which {a} results in the preparation of a narrative medical report prepared and attested to in accordance with LC§ 4628, any applicable procedures promulgated under LC§ 139.2 and the requirements of 8 CCR § 10606, and {b} is either performed by a (QME), (AME), or (PTP). *‘Pass Through’ Reports - “The physician has not bothered to perform any reasoned analysis at all. There are merely unsupported conclusions with no basis. In this type of report usually one or two sentences of ‘conclusions’ [reasoned medical opinion?] are usually hallmarked by having no factual or medical reasons expressed for the conclusion.”* **Honorable W. Ordas & N S Udkovick, WC Judges**

New court decisions are sure to come; but guiding criteria can still be found in the following cases:

- Le Vesque vs. WCAB (1970) 1 Cal. 3d 627, 35 CCC 16
- Hegglin vs. WCAB (1971) 4 Cal 3d 162, 36 CCC 93.
- Minniear vs. Mt. San Antonio Community College District (1996) SBR257801, Cal. Comp Cases 1055
- Kuelen vs. WCAB (1998) 66 Cal. App. 4th 1089,1096
- Boyd v. WCAB (1997) 62 CCC 498
- Rachel Daly v. WCAB, Stanford Hospital 5 WCAB Rptr. 10,022

IV. DRE Rating Criteria - Diagnosis Related Estimates ^{1 & 2}

‘Injury’ is the common denominator in Workers Compensation impairment and the DRE method remains the principal method to evaluate an individual having an injury. “The DRE method is the primary method used to evaluate individuals with an injury. (AMA 5th Ed., 374) Physician identifies findings (ROM, Symptoms, Signs, Appropriate Test Results) supporting the DRE Category.

DRE model relies on the history, physical examination findings (neurological deficits not spinal motion), and the results of clinical testing (Imaging studies, Electrodiagnostic, etc.) as it attempts to document anatomical and physiological impairment relating to an injury, rather than congenital developmental or age-related conditions. (AMA Guides Newsletter- May/June 2004).

Master the AMA Guides (page 197) states that in the case of multiple injuries or conditions, if the pathology affects different spinal regions, the DRE method is applied to each region. Only when the pathology reoccurs or repeats in the same spinal level or region is the ROM method use. Spinal level refers to an area bounded by two vertebrae, a single spinal disk and associate nerve roots and nerves.

1. DRE Evaluation Criteria: - AMA 5th Ed, page 379 & 398 & – AMA 5th Ed., pages 405 & 406.

- 1.1. **Clinical findings must be correlated to the imaging studies, which have been used to confirm a diagnosis. Without clinical correlation, a ‘positive’ imaging study in itself does not make the diagnosis or cannot be used as the sole support for an impairment rating.**
- 1.2. **The P&S report must clearly outline physician’s evaluating criteria and its support.**
- 1.3. For determining impairment based on the clinical **diagnosis related findings** refer to pages 381 to 398 (Chapter 15) **AMA Guides –5th Edition.**

2. Box 15-1 provides the necessary definitions evaluating physician can use to assign an individual to DRE categories I, II or III. (AMA Guides, page 382).

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Box 15-1: Definitions of Clinical Findings Used to Place an Individual in DRE Category

Muscle Spasm

Muscle spasm is a sudden, involuntary contraction of a muscle or group of muscles. Paravertebral muscle spasm is common after acute spinal injury but is rare in chronic back pain. It is occasionally visible as a contracted paraspinal muscle but is more often diagnosed by palpation (a hard muscle). To differentiate true muscle spasm from voluntary muscle contraction, the individual should not be able to relax the contractions. The spasm should be present standing as well as in the supine position and frequently causes a scoliosis. The physician can sometimes differentiate spasm from voluntary contraction by asking the individual to place all his or her weight first on one foot and then the other while the physician gently palpates the paraspinal muscles. With this maneuver, the individual normally relaxes the paraspinal muscles on the weight-bearing side. If the examiner witnesses this relaxation, it usually means that true muscle spasm is not present.

Muscle Guarding

Guarding is a contraction of muscle to minimize motion or agitation of the injured or diseased tissue. It is not true muscle spasm because the contraction can be relaxed. In the lumbar spine, the contraction frequently results in loss of the normal lumbar lordosis, and it may be associated with reproducible loss of spinal motion.

Asymmetry of Spinal Motion

Asymmetric motion of the spine in one of the three principal planes is sometimes caused by muscle spasm or guarding. That is, if an individual attempts to flex the spine, he or she is unable to do so moving symmetrically; rather, the head or trunk leans to one side. To qualify as true asymmetric motion, the finding must be reproducible and consistent and the examiner must be convinced that the individual is cooperative and giving full effort.

Non-verifiable Radicular Root Pain

Non-verifiable pain is pain that is in the distribution of a nerve root but has no identifiable origin; i.e., there are no objective physical, imaging, or electromyographic findings. For dermatomal distributions, see Figures 15-1 and 15-2.

Reflexes

Reflexes may be normal, increased, reduced, or absent. For reflex abnormalities to be considered valid, the involved and normal limb(s) should show marked asymmetry between arms or legs on repeated testing. Once lost because of previous radiculopathy, a reflex rarely returns. Abnormal reflexes such as Babinski signs or clonus may be signs of corticospinal tract involvement.

Weakness and Loss of Sensation

To be valid, the sensory findings must be in a strict anatomic distribution, i.e., follow dermatomal patterns (see Figures 15-1 and 15-2). Motor findings should also be consistent with the affected nerve structure(s). Significant, long-standing weakness is usually accompanied by atrophy.

Atrophy

Atrophy is measured with a tape measure at identical levels on both limbs. For reasons of reproducibility, the difference in circumference should be 2 cm or greater in the thigh and 1 cm or greater in the arm, forearm, or leg. The evaluator can address asymmetry due to extremity dominance in the report.

Radiculopathy

Radiculopathy for the purposes of the *Guides* is defined as significant alteration in the function of a nerve root or nerve roots and is usually caused by pressure on one or several nerve roots. The diagnosis requires a dermatomal distribution of pain, numbness, and/or paresthesias in a dermatomal distribution. A root tension sign is usually positive. An appropriate finding on an imaging study must substantiate the diagnosis of herniated disk. The presence of findings on an imaging study in and of itself does not make the diagnosis of radiculopathy. There must also be clinical evidence as described above.

Electrodiagnostic Verification of Radiculopathy

Unequivocal electrodiagnostic evidence of acute nerve root pathology includes the presence of multiple positive sharp waves or fibrillation potentials in muscles innervated by one nerve root. However, the quality of the person performing and interpreting the study is critical.

AMA Guides, Section 15.1a, page 374 requires that evaluating physician's history taking and reporting describe in detail the chief complaints and the quality, severity, anatomic location, frequency, and duration of symptoms. Employee's description of complaints (including pain, numbness, paresthesias, weakness) and how these factors interfere with activities of daily living (ADL), can further assist evaluating physician to pinpoint a specific WPI% within a given DRE category.

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In deciding where to place an individual's impairment rating within a range, the physician needs to consider all the criteria applicable to the condition, which includes performing activities of daily living (ADL), and estimate the degree to which the medical impairment interferes with these activities. AMA Guides, page 20.

On page 204 of *Master The AMA Guides*, Dr. Cocchiarella states:

- Use the DRE method as the method of choice (for rating spinal impairment).
- When determining what end of the range to use, determine whether the condition and its impact on ADL is consistent with that condition, or if the impairment has led to worse functioning. If ADL are more severely impacted than expected for the condition, use the upper end of the scale.

Clinical Findings That Indicate Corresponding DRE Categories*		
Clinical Findings	DRE Category	Impairment Rating (%)
No clinical findings, no documented neurologic impairment, no change in structural integrity or fractures, only symptoms.	I	0% <i>No Pain-Add-On from Chapter 18</i>
Muscle spasm alone	II	5%-8%
Muscle guarding alone	II	5% -8%
Asymmetry of spinal motion	II or higher	> 5%-8%
Non-verifiable radicular root pain alone	II	5%-8%
Reflex abnormalities or marked asymmetry between arms or legs	II or higher	> 5%-8%
Weakness or sensory loss in dermatomal distribution, caused by spinal pathology	III or higher	> 10%-13% (LS) >15%-18% (CS)
Atrophy, caused by spinal pathology	III or higher	> 10%-13% (LS) >15%-18% (CS)
Radiculopathy	III or higher	> 10%-13% (LS) >15%-18% (CS)
Electrodiagnostic verification of radiculopathy	III or higher	> 10%-13 >15%-18% (CS)
AOMSI	IV or higher	> 20%-23% (LS) > 25%-28% (CS)
Cauda Equina Syndrome	Higher than V; see neurology assessment (Chapter 13)	> 35%-38% (CS) > 25%-28% (LS)
Urodynamic Tests	Higher than V; see neurology assessment (Chapter 13)	> 35%-38% (CS) > 25%-28% (LS)
* From an Original by Linda Cocchiarella & Stephen J. Lord: <i>Master The AMA Guides Fifth</i> . American Medical Association, United States, 2001.		

The DRE Tables: (1) Cervical Spine: AMA 5th Ed., Table 15-5, page 392, (2) Thoracic Spine: AMA 5th Ed., Table 15-4, page 389, and (3) Lumbar Spine: AMA 5th Ed., Table 15-3, page 384.

SPINAL ROM RATING METHOD

The P&S report must clearly outline physician's evaluating criteria and its clinical support.

1. **AMA 5th Ed., (Chapter 15), Section 15.8 (a, b & c), pages 398 to 422.**
2. **Calculating ROM of impairments, must abide to the precise criteria outlined by the AMA 5th Ed., Section 15.8a, page 399.**
3. **Evaluating Physician should avoid:**
4. **Using unexplained ROM limitations of one or more spinal segments for calculating impairment under AMA 5th Ed., Section 15.9 (lumbar spine), Section 15.10 (thoracic spine), or Section 15.11 (cervical spine).**
5. **Using pre-existing degenerative disc disease as the only clinical support for the use of the ROM method.**
6. **Master the AMA Guides, page 197:** In the case of multiple injuries or conditions, if the pathology affects different spinal regions, the DRE method is applied to each region. Only when the pathology reoccurs or repeats in the same spinal lever or region is the ROM method used. Spinal level refers to an area bounded by two vertebrae, a single spinal disk and associate nerve roots and nerves
7. **ROM applies:**
 - 7.1. **Where there is recurrent radiculopathy caused by a new or recurrent disk herniation or where there is new radiculopathy caused by a recurrent injury to the same spinal region**
 - 7.2. **New Injury means an injury to a spine area that was essentially injured free before the incident even though other aging or pre-existing asymptomatic degenerative changes might be present.**
 - 7.3. **Recurrent Injury refers to an injury to a spine region that has a history of injury. Refers to the same condition, which is asymptomatic between episodes. Condition is also considered recurrent if symptoms increase from or is still considered to be due to, or is a normal progression of the original condition.**
8. **ROM method is only used to rate individuals with (1) multilevel fractures, (2) recurrent radiculopathy, (3) multilevel radiculopathy, (4) multilevel loss of structural integrity, (5) jurisdictional requirement or no-injury evaluations. (AMA 5th Ed., 398). One exception occurs when individuals, having corticospinal tract involvement and are treated with decompression and multilevel fusion, are rated via the DRE method because it is difficult to assess ROM with paralysis.**
 - 8.1. **AMA Guides page 374:** "The DRE method is the primary method used to evaluate individuals with an injury. The ROM method is only used to evaluate individuals with an injury at more than one level in the same spinal region and in certain individuals with recurrent pathology."
9. **In those situations in which the AMA allows determining impairment based on the range of motion method. (AMA Guides, pages 398-422)**

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- 9.1. Evaluating physician must ensure that adequate warm-up movements have been performed. AMA 5th Ed., page 399.
- 9.2. Measure ROM and determine any angle of ankylosis or any restricted motion that is present. AMA 5th Ed., page 399 & 403.
- 9.3. Perform at least 3 measurements of each motion and determine which measurements meet reproducibility criteria and calculate the average of each set of 3 measurements.
- 9.3.1. If acute muscle spasm is present, this should be noted in the examiner's report. However, the mobility measurements would not be valid for estimating permanent impairment. Rating should be deferred until after any acute exacerbation of the chronic condition has subsided. AMA 5th Ed., page 399.
- 9.4. Physician must seek consistency; repeat tests when necessary or discard all together when re-testing remains inconsistent. AMA 5th Ed., page 399.
- 9.4.1. "The physician should seek consistency when testing active motion, strength and sensation. **Tests with inconsistent results should be repeated. Results that remain inconsistent should be disregarded.** When the physiologic measurements fail to match known pathology they should be repeated and, if still inconsistent, disallowed until documented evidence is provided for the abnormalities noted on the physical examination." AMA 5th Ed., page 399:
- 9.5. Clinical findings must be correlated to the imaging studies, which have been used to confirm a diagnosis. Without clinical correlation, a 'positive' imaging study in itself does not make the diagnosis and cannot be used as the sole support for an impairment rating.

Table A-2 Recoding ROM Measurements for The Spine				
Spinal Area	Plane	ROM-0-ROM (°)	Clinical Examples	
			Text Description	SFTR Recording (°)
Cervical	Sagittal	Extension -0- Flexion (60)-0-(50)	Extends 30°, flexes 45°	S: 30-0-45
Cervical	Frontal	Bending Left lateral -0- Right lateral (45)-0-(45)	Bends 30° to left, 40° to	F: 30-0-40
Cervical		Rotation Left -0- Right (80)-0-(80)	Rotates left 40°, right 50°	R: 40-0-50
Thoracic	Sagittal	Extension -0- Flexion (0)-0-(45)	Extends 0°, flexes 45°	S: 0-0-45
Thoracic	Frontal	Bending Left lateral -0- Right lateral (45)-0-(45)	Bends left 45°, right 20°	F: 45-0-20
Thoracic		Rotation Left -0- right (30)-0-(30)	Rotates left 15°, right 20°	R: 15-0-20
Lumbar	Sagittal	Extension -0- Flexion (25)-0-(60)	Extends 25°, flexes 40°	S: 25-0-40
Lumbar	Frontal	Bending Left lateral -0- Right lateral (25)-0-(25)	Ankylosis of the spine in 20° left lateral flexion Ankylosis in 20° right lateral flexion Restricted motion from 20° to 30° of left lateral bending	F: 20-0 F: 0-20 F: 30-20-0

* Normal Ranges are in parentheses.
† A non-0° starting position is noted in the ankylosis table.

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9.6. Neurologic Impairment: For the neurological component of ROM evaluation criteria refer to AMA Guides Section 15.12, page 423 and page 403, Section 15.8d.

9.7. Clinical Diagnosis Impairment: For determining impairment based on this portion of the ROM Method, refer to AMA 5th Ed., pages 398 to 404. AMA 5th Ed., Table 15-7 on page 404.

The impairment rating values found in the guides represent estimates of the extent of impairments based on the physician's judgment, experience, training, skill, and thoroughness. Considerations of factors such as sensitivity, specificity, accuracy, reproducibility, interpretation of lab test results and clinical procedures, as well as recognition of variability among the interpretations of different observers, are variables affecting the determination of a WPI.

Completeness and reliability of the medical documentation are an integral part of the impairment rating process and strengthen the numeric impairment figures derived from a well-structured set of thorough observation and testing as outlined in the AMA Guides evaluation criteria. **No comprehensive P&S medical report is immune from the requirement that determination of any impairment level must follow the AMA Guides established evaluation criterion and be supported by anatomic/clinical findings as well as be explained by a well-reasoned/rational medical opinion.**

Evaluating physician must obtain clinical information from medical records and through performance of a physical examination and compare clinical information from several sources to check for consistency. (AMA 5th Ed., 19 & 593) It is the evaluating physician's responsibility to resolve disparities when possible, if the clinical information is inconsistent. Physician must avoid duplicating or 'creating' impairment by providing incomplete reporting of findings, misuse of proper evaluation criteria, giving incomplete description of medical studies or by disregarding AMA assessment and evaluation criteria. (AMA 5th Ed., 374 to 377).

In determining an overall level of impairment evaluating physician should always address the following question: *If it were not for the non-vocational factors or pre-existing conditions, would this level of impairment exist?*

Consistency is the key word when addressing impairment in a California P&S report. Consistency of imaging studies, to clinical findings on examination, to the medical/treatment histories, to the impairment rating criteria of the AMA Guides and to a reasoned medical opinion.

Bibliography

¹ Linda Cocchiarella & Gunnar BJ Anderson: ***Guides to the Evaluation of Permanent Impairment, Fifth Edition***. American Medical Association, United States, 2001. <http://www.ama-assn.org/>

² Linda Cocchiarella & Stephen J. Lord: ***Master The AMA Guides Fifth***. American Medical Association, United States, 2001

³ California Code of Regulations; Article 7, § 9805: ***Schedule for Rating Permanent Disabilities***. January 2005 Edition; <http://www.dir.ca.gov/dwc/PDR.pdf>

⁴ James B. Talmage, & J. Mark Melhorn: ***A Physician's Guide to Return to Work***. American Medical Association, United States of America, 2005.

**Luis Pérez-Cordero & Craig Andrew Lange
Impairment & Disability Rating Specialists
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