13.1 Definitions of General Terms

13.1.1 Occupational Disability

The Railroad Retirement Act identifies occupational disability as a permanent physical or mental condition that renders one unable to work in his or her regular railroad occupation in the railroad industry.

13.1.2 Regular Railroad Occupation

Regular railroad occupation is defined as the occupation in the railroad industry in which an employee:

- Has engaged in service for hire in more calendar months than the calendar months in which he or she has been engaged in service for hire in any other occupation during the last preceding five calendar years, whether or not consecutive; or

- Has engaged in service for hire in not less than one-half of all of the months in which he or she has been engaged in service for hire during the last preceding 15 consecutive calendar years.

If an employee last worked as an officer or employee of a railway labor organization and if continuance in such employment is no longer available to him or her, the regular railroad occupation shall be the position to which the employee holds seniority rights or the position which he or she left to work for a railway labor organization.

13.1.3 Impairment

An alteration to an individual's health status that is assessed by medical or functional means.

13.1.4 Permanent Impairment

Permanent impairment refers to a physical or mental impairment or combination of impairments that can be expected to result in death or has lasted on a continuous basis or can be expected to last for a continuous period of not less than 12 months.

13.1.5 Disability

An alteration to an individual's capacity to meet personal, social, or occupational demands, or to meet statutory or regulatory requirements.

13.1.6 Treating Medical Source

A treating medical source is a medical professional to whom the claimant has been going for treatment on a continuing basis. The claimant may have more than one treating medical source.

13.1.7 Consultative Exam (CE)

An examination by a medical source (often a specialist) performing a medical evaluation on a limited basis at the expense of the Railroad Retirement Board.

13.1.8 Consulting Medical Source

A consulting medical source is a medical professional (often a specialist) to whom the claimant's medical record may be referred for a review to provide opinions concerning a claimant's residual functional capacity and/or the sufficiency of the medical evidence in the file.

13.2 Initial Step In Occupational Disability Adjudication

The initial step in the adjudication of occupational disability is the review of the Disability Application filed with the Railroad Retirement Board (RRB) field office and forwarded to the Chicago headquarters for review. After receipt of the file at headquarters, a new claim folder is established and forwarded to the Disability Benefits Division (DBD) for adjudication. The file should contain information about employment and medical records pertaining to the nature of the claimant's disability. The initial step is to review the file for completeness, assess eligibility, and determine if there is sufficient medical evidence to adjudicate a claim.

The forms that should be included in the file are listed below:

13.2.1 Form AA-1 - Application For Employee Annuity

This form contains information needed for determining entitlement for an employee annuity under the Railroad Retirement Act. Information on this form includes data concerning the claimant's past railroad work. The data in this section should be used to ascertain the claimant's regular railroad occupation.

13.2.2 Form AA-1d - Application For Determination Of Employee Disability

This form contains information about the claimant's disability and medical providers which have treated this condition.

13.2.3 Form G-3-EMP - Report Of Medical Condition By Employer And Form RL-11

Form G-3-EMP contains information concerning the claimant's ability to work including the ability to perform his or her regular railroad occupation, a description of the type of work that he or she can perform, work restrictions and disqualification information. The information on this form may be based upon the results of medical evaluations that have been conducted by medical examiners on behalf of the railroad. Form RL-11, *Letter for G-3EMP Disqualification Request for Medical Evidence from Railroad Employers* requests that the employer complete the G-3-EMP form. (These forms should only be released in cases where the applicant meets the requirements for an occupational disability annuity (see DCM 3.2.1) and claims to have been disqualified by the carrier.) Form G-197, *Authorization to Disclose Information to the Railroad Retirement Board*, must be included with all G-3EMP requests. The G-197 form must be signed by the applicant or authorized individual, authorizing the release of medical information to the RRB.

NOTE: If the applicant does not claim disqualification by the carrier or doesn't qualify for an occupational disability annuity, then you may use Form RL-11D1 to request medical evidence by the employer. Effective June 17, 2024, it is no longer required prior to adjudicating a disability case to the release of the RL-11D1 or wait for a response to the form. If the employer attaches other forms or reports in lieu of completing some or all items of the G-3EMP, accept these attachments as if the information had been entered on the Form G-3EMP.

13.2.4 Form G-250 - Request For Medical Records

The claimant's medical records from acceptable medical sources (AMS) should accompany the submitted disability application. Copies of the claimant's medical records and a narrative summary should have been requested in the G-250 form from the claimant's treating AMS by field office staff. The claims examiner should determine if information from all treating AMS is available for review. The claimant should have identified the AMS who has treated them for the condition on the AA-1d form and the claims examiner should ascertain if the reports from all AMS are present in the file.

The Railroad Retirement Board regulations identify acceptable medical sources of medical evidence (Section 220.46). These sources include:

- Licensed physicians, (including psychiatrists),
- Licensed osteopaths,
- Licensed optometrists (for impairments of visual disorders, or for the measurement of visual acuity and visual fields only, depending on the scope of practice in the state in which the optometrist practices),
- Licensed or certified clinical psychologists (see NOTE 1),

- Licensed or certified school psychologists, or other licensed or certified individuals with another title who performs the same function as a school psychologist in a school setting, for impairments of intellectual disability, learning disabilities, and borderline intellectual functioning only (see NOTE 1),

- Licensed podiatrists, for impairments of the foot or of the foot and ankle, depending on the scope of practice in the state in which the podiatrist practices,

- Qualified speech-language pathologists, for speech and language impairments only, and when either licensed by a state professional licensing agency, fully certified by a state education agency where the individual practices, or holding a Certificate of Clinical Competence in Speech-Language Pathology from the American Speech-Language-Hearing Association,

- Licensed audiologists, for impairments of hearing loss, auditory processing disorders, and balance disorders when such disorders are within the individual's licensed scope of practice,

- Licensed Advanced Practice Registered Nurses or other licensed advance practice nurses with another title, within the individual's scope of practice (this category includes, but is not limited to, Certified Nurse Midwives, Nurse Practitioners, Certified Registered Nurse Anesthetists, and Clinical Nurse Specialists),

- Licensed Physician Assistants/Physician Associates, for impairments within the individual's licensed scope of practice, andPersons authorized to furnish a copy or summary of medical records from medical facility such as a, hospital, clinic, sanitarium, mental institution or health care facility. Generally, the copy or summary should be certified as accurate by the custodian of records for the facility, or by an authorized employee of the RRB, the SSA, the department of Veterans Affaris (VA) or a state agency.

Note 1**:** consistent with SSA policy, psychologist are required to be licensed at an independent practice level to be considered an AMS, but school psychologists are not subject to this requirement.

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13.2.5 Form G-250A - Medical Assessment Of Residual Functional Capacity

This form is provided to the claimant's treating medical sources and contains information concerning the claimant's ability to perform work-related activities. It is to be completed along with the G-250 form.

13.2.6 Form G-251 - Vocational Report

This form contains specific information regarding the claimant's work history for the last 15 years. Information concerning job demands and environmental factors are also

included in this report. The claimant is requested to sign this form and acknowledge that civil and criminal penalties may be imposed if fraudulent statements are provided.

13.2.7 Forms G-251A – Railroad Job Information

This form request job information regarding the claimant's job demands. The Field Office will release a Form G-251A to the employer. The Field Office will enter the regular railroad job position or occupation, location and date last worked. The employer is requested to return the completed form within 30 calendar days from the date the form is released.

13.3 Determination Of Whether The Individual Is In Compensated Railroad Service

(See Figure 1 for Sect. 3-9)

The claims examiner must verify whether the claimant is currently in compensated railroad service. Persons who are in compensated railroad service are not eligible for benefits.

13.4 Determination Of Whether Mental Or Physical Impairment Is Expected To Last 12 Months Or Result In Death

The claims examiner needs to evaluate whether the impairment(s) is expected to last 12 or more months or result in death. If the impairment is not expected to last 12 months or result in death, the claim is denied. The claims examiner should obtain additional medical evidence if the information in the file is insufficient to make this determination. If the impairment(s) is expected to last 12 or more months, a determination needs to be made as to whether the information contained in the medical record is sufficient to perform an initial disability rating as identified in Section 5 of this document.

Documents which need to be reviewed to determine if the impairment is expected to last 12 months or result in death include:

13.4.1 Form AA-1d - Application For Determination Of Employee Disability

The nature of the claimant's medical condition is described in Section 3 of the AA-1d form along with information concerning the date that the claimant last worked. For persons who have chronic conditions that are not expected to improve and who are not working, it is reasonable for the claims examiner to assume for the purpose of a claim evaluation that the condition could be expected to last 12 months.

13.4.2 Form G-250 - Request For Medical Records

The claimant's medical records from the treating medical source(s) should accompany the submitted disability application. Copies of the claimant's medical records and a

narrative summary should have been requested by the field office (Form G-250) from the claimant's treating medical source(s). This information should be reviewed to determine if the claimant has a chronic medical condition that is not expected to improve.

13.4.3 Medical Evidence Of Record

Medical evidence of record includes hospital records, imaging studies, consultative examinations and ancillary tests. These types of documents provide objective evidence to confirm and evaluate an impairment and need to be reviewed to determine if an impairment will last 12 months or result in death.

13.5 Determination Of Whether The Information In The Medical Records Is Sufficient For Reaching An Initial Disability Decision

Information concerning the nature of the medical condition should be reviewed in conjunction with information concerning the date the claimant last worked as identified in Section 3 of the AA-1d form. Data concerning diagnosis, symptoms, objective findings, laboratory test results, X-ray and other imaging findings, treatment and prognosis should be in the medical record. Ideally, this information should be summarized in a narrative report. If a narrative report is not available, the claims examiner may have to review the individual medical records. Such information forms the medical basis for the preliminary adjudication of a disability claim. In addition, the Residual Functional Capacity Evaluation, as specified in Form G-250a, should have been completed by the medical source and be available for review. If the claims examiner determines that the information is not sufficient to perform a disability adjudication, additional information should be requested from the claimant's medical source(s) to continue the claims review process.

If the information in the medical records is considered to be sufficient to reach a disability determination, then an assessment needs to be made as to whether the claimant's condition meets or equals the RRB's Listing of Impairments (20 CFR Part 220).

13.6 Determination Of Whether The Condition Meets Or Equals The RRB Listing Of Impairments

13.6.1 Overview Of The Listing Of Impairments

The RRB's Listing of Impairments is a listing of conditions by the major body systems which are considered to generally prevent an individual from engaging in substantial gainful activity.

The information contained in the claimant's medical records must be reviewed concerning whether the employee's medical condition is considered to meet or equal the standards identified in the Listing of Impairments. The purpose of the Listing of

Impairments is to identify those individuals who unquestionably have disabling impairments.

13.6.2 Determination Of Whether The Condition "Meets" The Listing Of Impairments

An impairment meets a listing only when it manifests the specific findings described in the medical criteria of that listed impairment. The determination that the condition meets the Listing of Impairments cannot be based on a diagnosis alone since other findings associated with the condition must also be present. These requirements can include confirmatory medical test findings to confirm the existence of the impairment and specific objective findings which indicate significant functional impairment.

EXAMPLE: The mere diagnosis of active rheumatoid arthritis is not considered sufficient to meet the Listing of Impairments. The following factors must also be present:

A. History of persistent joint pain, swelling, and tenderness involving multiple major joints and with signs of joint inflammation (swelling and tenderness) and current physical examination despite prescribed therapy for at least 3 months, resulting in significant restriction of function of the affected joints, and clinical activity expected to last at least 12 months; and

B. Corroboration of diagnosis at some point in time by either:

- Positive serologic test for rheumatoid factor; or
- Antinuclear antibodies; or
- Elevated sedimentation rate; or
- Characteristic histologic changes in biopsy of synovial membrane or subcutaneous nodule (obtained independent of Social Security disability evaluation).

13.6.3 Determination Of Whether The Condition "Equals" The Listing Of Impairments

To determine if an impairment or combination of impairments equals the Listing of Impairments, a comparison must be made of the medical findings (the set of symptoms, signs and laboratory findings) in the claimant's medical record and the medical findings specified for the listed impairment most like the claimant's impairment(s). The claimant's impairment(s) can be considered equal to the listing only if the medical findings are at least equivalent in severity and duration to those specified in the listing. A decision of equivalence can never be made based solely on symptoms.

Equivalence is established under the following three circumstances:

A. An unlisted impairment where signs, symptoms and laboratory findings describe severity equal to the most closely related listed impairment; or

B. Listed impairment where the signs, symptoms and laboratory findings are not identical to those specified for that impairment, but reflect equivalent severity; or

C. Combined impairments where the signs, symptoms and laboratory findings reflect severity equal to the listed impairment most like the claimant's most severe impairment.

If a claims examiner believes that a listing is equaled, the case may be sent to the consulting medical source for review.

13.6.4 Medical Condition Does Not "Meet" Or "Equal" The Listing Of Impairments

If the condition does not meet or equal the criteria identified in the Listing of Impairments, then the condition should be assessed in accordance with the criteria identified in Section 7.0.

13.7 Determination Of Whether The Employee Has Been Medically Disqualified From Regular Railroad Occupation By Railroad Employer

Information from the employer concerning the claimant's ability to perform the duties of the regular railroad occupation should be reviewed. Information concerning this matter should be present in Form G-3-EMP, which is generally completed by the railroad medical officer or other railroad representative in cases where the applicant claims to have been disqualified by the carrier. Form G-3-EMP provides information concerning the claimant's ability to perform his or her regular railroad occupation for medically documented reasons and has evidence that supports the conclusion that the applicant is unable to perform his or her occupation. If the employee is not allowed by his railroad employer to continue working in his or her regular railroad occupation, the claims examiner will consider the claimant disabled unless, based on the evidence in the Form G-3-EMP and elsewhere in the file, the claims examiner determines that no reasonable person could conclude that the employee can no longer perform his or her regular railroad occupation for medical reasons.

In cases where a disqualification notice is received, it is not necessary to have medical evidence in file which details the severity of the disability. Rather, it is sufficient to make a rating with medical evidence in file that confirms the impairment. In these types of cases do not delay an occupational disability rating by developing medical evidence or scheduling medical examinations.

EXAMPLE 1: A clerk has been disqualified by the railroad due to a history of degenerative arthritis. Medical evidence submitted consists of treating medical source notes and chiropractic records. The records submitted did not include X-ray reports. The claimant also states on AA-1d that he/she takes medication for arthritis. The medical evidence submitted supports the claimed impairment for which the claimant

was disqualified. There was no medical evidence submitted that contradicts or disputes the disqualification, therefore, the claimant can be rated occupationally disabled without further development.

13.8 Determination To Ascertain If The Condition And Job Title Are Covered In The Occupational Disability Tables (A Tables)

Information in all of the medical records, the AA-1, and Form G-251, Vocational Report should be reviewed by the claims examiner to ascertain whether the claimant's condition and job title are included in the Tables. If the information indicates that the condition and the job title for the claimant's regular railroad occupation are included in the Tables, the claims examiner should evaluate the evidence in accordance with the procedures identified in Section 9.

If either the condition or the job title is not included in the Tables, then the claimant's condition should be evaluated in accordance with the criteria identified in Section 10, Independent Case Evaluations.

Click this link to view the Occupational Tables.

13.9 Claims Evaluation For Conditions And Job Titles Covered In The Tables

13.9.1 Establish The Medical Diagnosis

Confirmatory tests can include information from medical records that document the presence of a condition, a surgical procedure, or the result of a specific diagnostic test. In some instances, confirmatory tests may also provide information on the claimant's functional capacity and are also listed as disability tests. Confirmatory test information is present in the initial section regarding each body part covered in the Tables. Appendix A contains information further detailing specific test criteria for the confirmatory test results or findings in the Tables.

If the information is incomplete, then further information should be obtained concerning the claimant's medical condition from other sources including consultative exam and/or functional evaluation tests. If some of the information is not in accordance with the rest of the medical information, it should be evaluated in accordance with the criteria identified in Section 10.

There are two types of confirmatory tests: highly recommended and recommended. These tests are discussed below.

13.9.1.1 Highly Recommended Tests

The designation of a confirmatory test as being highly recommended means that the test is almost always performed to establish a diagnosis. For many conditions, only one

highly recommended test finding is suggested to establish a diagnosis. There may be times when that test is not available or is negative, but other detailed testing confirms the diagnosis.

EXAMPLE A: For the condition of pulmonary hypertension, only one confirmatory test is considered to be highly recommended: the electrocardiogram. This condition is identified in the Tables as highly recommending an electrocardiogram with definite right ventricular hypertrophy to confirm the diagnosis.

An electrocardiogram with evidence of right ventricular hypertrophy will confirm the diagnosis. However, it is reasonable to consider that a Swan-Ganz catheter may be inserted into the pulmonary artery to directly measure the pressure. This would also establish the diagnosis.

There may be some conditions for which several highly recommended tests are suggested to establish a diagnosis. In these circumstances, all highly recommended tests are suggested together to establish the diagnosis.

EXAMPLE B: Three highly recommended criteria are identified for the diagnosis of chronic back pain, not otherwise specified. These criteria include:

- A history of back pain under medical treatment for at least one year, and
- A history of back pain unresponsive to therapy for at least one year, and
- A history of back pain with functional limitations for at least one year.

Sometimes the claimant may have undergone detailed testing which may provide more comprehensive information than one of the A highly recommended tests listed in the Tables, making the simpler test unnecessary. To illustrate, in Example A above, if the medical records contained direct measurement of elevated pulmonary artery pressure, an electrocardiogram would not be necessary to confirm the diagnosis. In cases where the highly recommended test is absent, there must be a logical, rational basis, based on the medical record, for accepting the diagnosis. The case summary rationale must support this decision.

13.9.1.2 Recommended Tests

The designation of a confirmatory test as recommended means that the test may not be performed, or be positive, to establish the diagnosis. However, a positive test provides significant support for confirming the diagnosis. If there are no highly recommended test(s) for the condition, at least one of the recommended tests should be positive.

There are two categories of recommended tests which are described below.

A. Imaging Studies

These studies can include MRI, CAT scan, myelogram, or plain film X-rays. For conditions where several of these imaging studies are identified as recommended tests, at least one of the test results should be positive and meet the confirmatory test criteria. For some conditions, such as degenerative disc condition, there are several equivalent imaging methods that can be used to establish a diagnosis.

B. Other Tests

This category of tests refers to non-imaging studies. For some conditions, there is no single confirmatory test which can be used to establish a diagnosis since all available medical tests may have significant false negative or false positive rates. For example, electro-diagnostic tests, including electromyography and nerve conduction studies, are frequently abnormal in a person with a radiculopathy. However, some individuals with a radiculopathy can have normal electro-diagnostic test results.

If there is no highly recommended confirmatory test requirement and the confirmatory tests only include non-imaging procedures, at least one of these tests should be positive. The greater the number of tests that are positive, the greater the confidence that the correct diagnosis has been established.

EXAMPLE: The diagnostic confirmatory tests for ventricular ectopy, a cardiac arrhythmia, include the following recommended tests:

- Medical record review, i.e., a review of the claimant's medical records, or
- Holter monitoring, or
- Provocative testing producing a definite arrhythmia.

In this situation, only one of the recommended confirmatory tests should to be positive to reach a diagnosis. However, the more tests that are positive, the stronger the support for the diagnosis.

If a diagnosis cannot be confirmed and all medical information is obtained, the claim is denied.

In most circumstances, the claims examiner should not request that a confirmatory test be performed to establish the diagnosis at the expense of the RRB through a consultative examination (CE). In some situations where a CE is being planned and a simple test may be performed to establish a diagnosis, the claims examiner has the discretion to request a confirmatory test.

In no circumstance should the claims examiner recommend that invasive testing be performed to confirm the diagnosis. Several of the confirmatory tests which are described in the Tables are invasive and it is not the intention of the Tables to suggest that invasive tests be performed. The inclusion of invasive tests in the

Tables confirmatory test section is intended to help the claims examiner evaluate the significance of findings which may be part of the submitted medical record.

13.9.1.3 Disability Determination

To reach a disability determination, disability test results need to be reviewed by the claims examiner. Disability tests measure the functional impact or impairment that a condition has on a person. The results of the test can classify a person as Disabled (D) or needing an Individual Case Evaluation (ICE). These terms are defined below:

A. "D" - If the claimant has a "D" result, this signifies that the claimant is disabled. Only one D disability test finding is required to reach a determination of disability.

B. "ICE" - If the claimant does not have any D results, the claim must be evaluated using the process described in Section 10.

13.10 Independent Case Evaluations (ICE)

Independent Case Evaluation (ICE) is used for claims in which job titles and/or medical conditions are not covered by the Tables. The second situation in which cases are subject to ICE are claims where the job and medical condition are met, but there is no matching disability test. The third situation in which cases are subjected to ICE are claims which have not received a "D" rating because medical variations make it necessary to look at specific job information and/or specific medical information to make a determination. The fourth situation in which claims are reviewed using ICE are situations in which the job titles and the medical conditions may be covered, but the information is not consistent or cannot be simply clarified. In this review, information in the Table regarding diagnosis and confirmation tests, as well as the tests judged to determine disability, may be a guide for the claims examiner in the decision process.

Independent Case Evaluation is a three step process:

The first step, medical information is reviewed to establish diagnosis and to establish an understanding of the condition by the claims examiner. Particular attention should be paid to the functional limitations of the condition. The impairments from the medical conditions relevant to claimant's regular occupation are determined.

The second step, the job information is evaluated to determine the job demands.

The third step, the medical information regarding relevant impairment is compared to the job demands.

13.10.1 Assessment Of Medical Information

13.10.1.1 Confirming The Diagnosis

The diagnosis will provide the claims examiner with the functional limitations that may be expected on a particular claim. The diagnosis is important for this reason to assess the other medical information. In some cases, the diagnosis is established through the initial review of the Tables.

13.10.1.2 Assess Concordance Of Medical Findings In Entire Medical Record

The information in the medical record should be reviewed to determine whether the opinions among acceptable medical sources (AMS) regarding medical condition findings are consistent, including the claimant's history, physical examination findings, laboratory or other test results, and other information in the claimant's file. The claims examiner should review the AA-1d to ascertain if all relevant treating AMS medical records are available. If AMS have had a role in providing treatment or assessing the claimant's condition and these records are not available for review, the disability examiner may use the most expeditious means available to obtain that medical evidence, if necessary. Once all relevant information has been secured, it should be reviewed and integrated into the disability determination process to decide if there is consistency of response among treating medical source s. However, if the information available from one or more AMS contains clear and convincing evidence, especially if there is objective supporting information, the claims examiner may proceed without obtaining all records from all treating AMS.

13.10.1.3 Significant Difference In Medical Findings

If the medical records reveal that there are marked differences in the treating AMS findings, then a CE and/or functional test should be obtained.

EXAMPLE: A brakeman's medical records reveal conflicting evidence concerning the character and functional impact of an underlying low back condition. The claimant reported to his orthopedist a history of prolonged back pain of five years duration with severe symptoms for three years. The claimant reported in his history that his low back problems had kept him from participating in sports which he had participated in prior to the onset of his severe back problems three years ago. An MRI revealed degenerative disc changes.

The claims examiner reviews the claimant's entire medical record which includes medical treatment that he received from an osteopathic medical source for the past three years just before he sought consultation with the orthopedic consultant. These medical records reveal a contradictory history from that provided to the orthopedist. The medical records reveal that the claimant had received medical therapy for a neck and later a low back strain following water-skiing and basketball injuries in the past two years. The claimant's stated medical history as provided to the orthopedist is not

consistent with the history in his medical records with respect to the impact that the pain has had on his lifestyle.

Since the RFC from the orthopedist could reasonably be expected to be based upon the claimant's medical history (rather than objective medical evidence), the quality of the RFC is jeopardized. In this type of situation, the claims examiner should request a consultative examination to resolve this matter and/or functional testing.

13.10.1.4 Significant Differences In Opinion Of RFC Among Treating Medical Sources And An Approach To RFC Quality Assessment

The RFC is a medical assessment and is based upon a review of the available medical evidence; it represents the judgment of the medical source. The RFC should be based upon clear and convincing medical evidence demonstrating an impairment. In such circumstances where clear and convincing medical evidence is not present, a CE with authorization to perform functional capacity tests may be required.

EXAMPLE: A carman has a history of obstructive lung disease and has complaints of shortness of breath with exertion. The treating medical source recommends no exertional activity. If the RFC is based primarily on symptoms of shortness of breath without consideration of the actual measurements of lung function or exercise performance, the finding is invalid. Shortness of breath can be caused by many factors including anxiety, psychological, and other factors. Lung function tests, such as Forced Expiratory Volume in one-second, are best predictors of exercise ability and should be used to establish performance limitations.

The following criteria should be assessed in determining the quality of an RFC:

A. Is the RFC largely based upon symptoms rather than objective evidence?

If the RFC is not supported by objective evidence of a condition that will result in impairment, then the treating medical source 's RFC should not be considered as being sufficient. The claims examiner should request additional information or records, a CE, or functional testing where appropriate.

EXAMPLE: The claimant, an engineer, reports a history of chronic low back pain. The physician's RFC opined that the claimant not lift over 35 pounds, bend, or stoop. No medical report is available, but a review of the medical records reveals that although the claimant sought medical attention on several occasions for low back pain, no specific abnormal physical findings have been documented. A plain film X-ray revealed that the claimant had some minor degenerative changes of the spine, but the radiologist reported these were normal for the claimant's age. No other definitive tests have been performed. The nature and extent of pain is not clearly documented in the medical records.

In this case, the RFC is largely based upon subjective symptoms. The claims examiner can request that a consultative examination and/or functional test be performed.

EXAMPLE: A general laborer works on maintenance of way for the past 10 years. His work includes repetitive lifting of tie plates and spikes not removed by the automated spike puller. This job requires the claimant to stand most of the day, walk on uneven surface, lift and carry objects weighing up to 20 pounds. He presents with a 5 year history of low back pain that is worsening. He reports prolonged standing and lifting of objects over 20 pounds is painful. Attempts at therapy have been unsuccessful. A report from his treating physician identifies that he has radicular pain in the L5 - S1 nerve distribution. An EMG reveals evidence of polyphasic wave activity in muscle innervated by L5 nerve. An MRI reveals diffuse degenerative disc changes more pronounced at L5-S1, but without definitive nerve impingement. A straight leg raise test is positive (both supine and sitting positions).

A review of the medical records reveals that physical therapists, his primary physician, and orthopedist specialist all have reported similar complaints, consistent physical findings, and recommended that he avoid heavy work including frequent standing, repetitive lifting, bending and twisting. The recommended limitations include no lifting over 40 pounds, no repetitive lifting over 10 pounds, and no prolonged standing or walking.

In this case, there is clear and convincing evidence that the RFC provided by the treating physician(s) is based upon valid medical evidence. The claimant's symptoms are consistent with the clinical findings including physical examination findings, imaging studies, and diagnostic tests. This medical history and the examination findings have been consistently reported by all of his medical care providers.

B. Is the RFC based upon objective tests that have poor reliability or validity and are, therefore, poor predictors of functional capacity?

If the objective tests have limited reliability and/or validity, then the claimant should be referred for a CE and/or functional tests to ascertain his or her functional capacity.

EXAMPLE: A dispatcher with a degenerative lumbar disc disorder has a treating physician's RFC which opines that the claimant cannot lift any objects over 10 pounds and is restricted from any activity involving repetitive bending or stooping. A review of medical records reveals that the dispatcher describes experiencing chronic low back pain for over one year that is aggravated by movement including lifting and bending. Physical examination is reported to reveal the presence of paravertebral muscle spasm and a diminished range of lumbar motion to 50% of what would be expected (method of measurement and reproducibility are not identified). Lumbar sacral X-rays reveal the presence of

degenerative disc changes throughout the lumbar spine, but more pronounced in the L4-5 and L5-S1 regions. An MRI reveals the presence of a significant disc bulge at these same levels but there is no report of any spinal stenosis or disc herniation.

In the Form G-250a the physician identifies several factors that support this RFC conclusion. These factors include the presence of degenerative disc changes in lumbar vertebrae seen with lumbar sacral spine X-ray, a disc bulge on an MRI, and the presence of back spasm and marked limited range of lumbar motion to <50% of the expected range.

This RFC is based upon medical evidence. However, as with many cases of chronic back pain, the evidence is of limited usefulness; see Table 1 for an example of significant findings related to the low back. Therefore, no one finding tells us that this man's back pain is significant and disabling. Together, they do support a physical basis for back pain, but are not diagnostic.

The examiner can look for indications in the medical records that this dispatcher has had maximal therapy, including work conditioning and strengthening in physical therapy. The examiner should look for consistency of findings across different providers, and evidence of attempts to return to work. If that evidence is not clear and convincing, functional testing can be ordered. (see Section 11)

13.10.1.5 Request For Consultations

Depending upon the amount of information in the file, the claims examiner may request that the claimant undergo functional tests in addition to, or in lieu of, other CEs. In such cases, if functional tests alone are recommended, the claims examiner should contact the claimant's treating medical source (s) to ascertain whether there is any contraindication or physical limitations to obtaining a functional test. If a CE is going to be performed, the CE can provide authorization to conduct the testing.

The protocols for functional capacity tests are described in Appendix C. The results of the examination and/or test(s) can be used to ascertain whether the claimant has an impairment that precludes the performance of the claimant's job functions. Additional review by a consulting medical source may be required to resolve significant discrepancies between the treating medical source's RFC opinion and that of the functional tests.

13.10.1.6 RFC Limitations Are Not Consistent With Functional Capacity Tests

Some claimants may have already undergone functional capacity tests, such as isometric strength tests, an FCE, or other tests. These results should be reviewed. If the treating medical source concluded that the claimant's functional capacity is substantially below those that have been measured in functional tests, then the claimant should be referred for a CE evaluation and/or functional tests to ascertain the basis for this discrepancy. Alternatively, the treating medical source may be requested to provide

a rationale for the basis of his or her conclusions after reviewing the results of the functional testing.

13.10.1.7 Weight Of Evidence Determination

If there is consistency in the findings of the medical evidence, all medical information should be assessed equally. The medical evidence is assessed to determine if there is clear and convincing objective evidence that the claimant has a significant medical condition and that this condition prevents him or her from performing his regular job. Under this approach, the claims examiner would find a claimant to be occupationally disabled if the medical evidence demonstrates that it is more reasonable to conclude that the claimant is unable to perform his or her occupation than to reach a contrary conclusion. The types of findings which support a determination that a condition has a significant functional impact, as well as factors which support a lesser impact, are found in the Occupational Disability Standards Manual.

Information from the medical history should also be reviewed to ascertain whether the claimant's medical condition has been associated with any episodes of pain or other symptoms which have resulted in an inability to perform the critical tasks of his occupation. The significance of the pain episodes is strengthened in general if they are associated with objective findings. Medical records can provide an overall indication of the claimant's condition over time and may significantly reflect his or her ability to perform a task over a given time frame. Information pertaining to any continued job activity should be closely examined.

The medical records should be reviewed to ascertain whether the claimant has been provided appropriate medical treatment and therapy for the condition(s) and whether the response to therapy has been (un)successful; this provides additional support to the medical source's opinion that the claimant' s medical condition is permanent. The records should be examined to ascertain whether there is evidence of poor compliance with medical treatment, including failure to keep appointments, use of appropriate medication, or other factors. If the claims examiner determines that the claimant may not have had the opportunity to receive an adequate course of therapy, and therefore concludes the condition may not be permanent or expect to last 12 months, it is highly recommended that the case may be referred for a CE.

For further discussion of this topic, refer to L82-165, "Weight to be given testimony of treating medical source."

13.10.1.8 Presence Of Substantial Objective Evidence Of Condition And Impairment

EXAMPLE: A carman has a history of degenerative lumbar disc disease. His medical findings include a history of chronic pain of several years duration, participation in a back exercise and rehabilitation program, use of anti-inflammatory medications, and participation in a weight loss program for obesity which resulted in a normalization of his weight and 25 pound weight loss. However, he continues to experience low back pain.

Over the past six months, he has experienced shooting radicular leg pains affecting his right leg in the distribution of the L5 nerve. His physical examination revealed limitation of lumbar mobility and a positive right straight leg raised test. An MRI revealed evidence of significant disc degeneration in L4-5 and L5-S1 disc spaces with narrowing of the intervertebral foramen and spinal stenosis. The L4-5 disc appears to be impinging on the nerve root, but this is not clearly evident on the MRI. An EMG revealed evidence of muscle denervation affecting the muscles innervated by L5 nerve. Flexion and extension views of the back revealed no spinal instability.

In this case, the presence of multiple medical findings supports the conclusion that there is substantial objective evidence of a significant condition and impairment. Although any isolated finding might not be sufficient to conclude that the claimant is disabled, together the findings support a diagnosis of a radiculopathy and spinal stenosis. The findings support a determination that the claimant is occupationally disabled since there is a high degree of clinical correlation of symptoms and the reported abnormal findings all support a common effect.

EXAMPLE: A trainman had a condition affecting his back and knee. He indicates that his ability to lift, carry, squat, and climb ladders is affected by both the conditions. The back condition is characterized by chronic back pain and he has been diagnosed with degenerative disc disease. The physical findings reveal nonspecific findings and an X-ray reveals degenerative disc changes.

The claimant also has arthritis of the right knee. X-rays of the knee revealed degenerative changes and the joint space is 2 - 3 mm. There is mild atrophy of the quadriceps muscles. His physician has completed an RFC stating that he cannot climb ladders more than occasionally, cannot squat more than occasionally, and cannot lift more than 20 pounds.

This trainman has atrophy of the quadriceps muscle, indicating disease in right knee significant enough that he has loss of muscle strength from disuse. This is clear and convincing evidence that the limitations set by the knee will be disabling for this job, which requires extensive climbing. Although the data on the back may not be sufficient at this point, the knee can be considered independently.

13.10.1.9 Limited Objective Evidence Of Significant Impairment

In this situation, although the claimant has one or more medical findings, the claims examiner determines that there is insufficient evidence upon which to reach a disability determination. There are several findings which could lead the claims examiner to reach the conclusion that the evidence is not sufficient to reach a "D" finding and that a CE and/or functional test should be performed.

13.10.1.10 Factors Supporting Lessening Impact

If the medical record reveals the presence of several factors supporting lessening impact identified as having a role in minimizing the impact of other findings, especially

any factor that would suggest an inconsistency between examination findings and symptoms or exaggerated responses, the claims examiner should request a CE and/or functional tests. Figure 4 identifies the factors supporting lessening impact. The claims examiner needs to evaluate the entire medical record and determine if there is evidence of a significant number of negative mitigating factors which would make a determination solely on the basis of a review of the medical file valid.

13.10.1.11 Additional Testing

If the claims examiner determines, based upon a review of the available medical evidence, that a final decision cannot be reached concerning disability for a claimant, the claims examiner should request a CE and/or functional tests. Factors that should contribute to such a recommendation for additional testing include those identified in Figure 4. Factors which provide lessening support for a disability include differences between RFC assessments among medical sources and limited objective evidence. In these circumstances, additional medical testing is recommended to resolve the matter of residual functional capacity.

In general, a CE may be conducted in conjunction with the functional capacity test. Such an examination should especially be considered where:

- There is minimal objective evidence, and/or
- there is conflicting medical evidence in file, and/or
- the reliability/validity of the evidence is questionable, and/or
- there are significant negative mitigating factors.

The claims examiner has the option to obtain a CE and/or functional capacity test. Section 11 contains an overview of the types of functional capacity tests that can be performed. The decision concerning the scope of additional testing that should be performed is based upon several factors. The claims examiner must exercise professional judgment in this matter depending on the needs of the case.

If the claims examiner finds that most of the evidence suggests that the person is not capable of performing the critical job demands but the evidence has some inconsistencies, limited functional tests may be requested to help confirm this assessment. In situations where the EPIC or PILE tests are not available, then isometric strength tests could be performed. However, it is important that limited testing not be used to assess disability for cases where there are potential multiple impairments or where there is minimal overall objective evidence. A more complete assessment of the claimant's overall effort and ability to perform tasks in a number of dimensions is recommended.

EXAMPLE: A shop laborer has a history of a radiculopathy and a herniated disc condition. He had an operation for this condition five years previously, underwent an

L4-5 laminectomy, and had a subsequent back fusion. He returned to work and has been successfully performing his job for the past several years. However, over the past five years, he has experienced a recurrence of significant back pain.

Although there is evidence of back pathology and prior surgery, there is no evidence that new pathology or any other event has changed the claimant's clinical picture since his surgery and he was able to work after the surgery with no apparent problems. More comprehensive testing is indicated.

13.10.2 Job Information

Determining the correct regular railroad occupation and associated job duties is required for occupational disability adjudication. Accurate job information is important for evaluating whether an applicant's impairment precludes performing his/her regular railroad occupation.

The regular railroad occupation is defined as follows:

- The occupation in which he/she has engaged in service for hire in more calendar months than calendar months in which he/she has been engaged in service for hire in any other occupation during the last preceding 5 calendar years, whether or not consecutive; or

- The occupation in which he/she has engaged in service for hire in not less than one-half of all of the months in which he/she has been engaged in service for hire during the last preceding 15 consecutive calendar years; or

- If an employee last worked as an officer or employee of a railway labor organization and if continuance in such employment is no longer available to him/her, the "regular railroad occupation" shall be the position to which the employee holds seniority rights or the position which he/she left to work for a railway labor organization.

13.10.2.1 Sources For Job Duty Information

Job duty information is required in the occupational disability process to compare with impairment-related restrictions. Relevant job duties are determined from several sources:

A. Form G-251, Vocational Report - Form G-251 is completed by the applicant. The information on this form includes work history for determining the regular railroad occupation and a job description of tasks performed. The tasks include a narrative description, environmental hazards and physical activities involved in an 8-hour work day.

B. Form G-251A, Railroad Job Information – Effective April 3, 2017, the Railroad Retirement Board (RRB) introduced a revised Form G-251A in accordance with the Disability Program Improvement Plan that will ask railroad employers to

provide job information about applicants who apply for an occupational disability benefit under Section 2 (a)(1)(iv) of the Railroad Retirement Act (45 U.S.C. § 231a(a)(1)(iv)). Collection of job information from the employers will assist the disability examiner with making an accurate disability determination. Prior to this date, the RRB used Form G-251a and G-251b Job Information reports to collect this information. Form G-251a was released to employers for employees with a generic job description attached. Generic job descriptions were used for a select number of railroad occupations and were some of the more common types of railroad jobs. The generic job description described how select occupations were generally performed in the railroad industry for employees. Form G-251b was released to employers for employees who did not have a generic job description.

The field office will be required to determine the employee's last regular railroad occupation and send the form to the employer. The disability examiner is required to ensure that the G-251A has been released by field service. Do not trace this form with the field office or the railroad employer. If the employer does not respond prior to adjudication, use the job duty information on Form G-251 when evaluating the occupational disability determination.

If the G-251A is returned, ensure that the correct regular railroad occupation has been determined using the guidelines above.

Prior to March 26th, 2025, a disability examiner had to wait at least 30 days from the date the form G-251A was released to the applicant's railroad employer prior to adjudicating the occupational disability claim. On March 26th, 2025, the Railroad Retirement Board approved in this memorandum dated March 25th, 2025, removal of the 30-day waiting period. Due to the request for the form to be completed often went unanswered, it was incomplete or not useful, or caused unnecessary delays in the adjudication of an occupational disability case.

13.10.2.2 Assessing The Employee's Regular Occupation Job Information

The file should be reviewed to determine whether the job information received by the employer and the applicant are consistent. When reviewing job information, all sources that submit information must be considered.

A. Assessing Job Information That is in Agreement

In this scenario, the job information on Form G-251 and the job information received from the railroad employer is in agreement, or no job information is returned from the railroad employer. Since all information is in agreement, no further action is necessary for assessing job information.

B. Assessing Job Information When Differences Exist

Differences in job information must be reconciled only when they are material.

A "material" difference is defined as job information that is received from different sources, a difference in job duties exists and the difference prevents the examiner from making a sound disability decision and therefore needs to be reconciled. For example:

A carman has a history of low back pain. The objective medical evidence in file shows degenerative disc disease and he/she is restricted to lifting 50 pounds occasionally. The employee claims to lift 75 pounds frequently in his job duties. The railroad employer indicates that the employee lifts only 40 pounds occasionally. Because the actual disability determination depends on the correct amount of lifting the employee did, this difference is considered "material" and must be resolved.

C. Assessing Non-material Differences

There may be situations where differences exist in job information but they will not be material. When there are "non-material" differences, the occupational disability rating should not be delayed for reconciliation. One scenario involves receiving information from an employee and an employer with discrepancies and areas of agreement. The areas of agreement (i.e., those job tasks common to both employee and employer job descriptions) may be precluded because of the medical condition.

EXAMPLE: A switchman has a history of severe degenerative arthritis in both knees. Objective medical evidence shows he is precluded from walking along uneven terrain. The G-251 shows that the employee lifts 75 pounds daily, bends, crouches and kneels constantly and walks along the railroad tracks for 6 hours a day. The railroad employer submits job information that states the employee lifts 40 pounds occasionally and sometimes bends, crouches and kneels. The employer does agree that the employee walks along uneven terrain for 6 hours per day.

In this case there are differences in job information. However, since there is agreement between the railroad employer and employee on the amount of walking along uneven terrain, and such activity is precluded because of the medical condition, a favorable rating can be made without reconciling the differences.

There may also be instances where there is discrepant job information and there are areas of agreement that are not precluded by the medical condition.

EXAMPLE: A secretary suffers from chronic obstructive pulmonary disease. A spirometry shows the FEV1 to be 80 percent of normal and the only restriction placed on the employee is to avoid fumes, noxious gases and dust. The G-251 indicates that the employee lifts 40 pound boxes of paper daily, sits 8 hours per day and sometimes bends, kneels and reaches. There is no indication that the secretary was exposed to fumes, noxious gases or dust. The railroad employer

indicates the secretary had to lift 25 pound boxes of paper and was not exposed to any environmental hazards.

Since there is no restriction on the amount of weight to be lifted, the discrepancy that involves the boxes of paper is non-material and does not have to be reconciled. The only restriction is based on environmental hazards, which are not found in the work place, and the claim should be denied.

Another type of non-material discrepancy involves discrepant job descriptions, but the claimant's impairment would restrict him/her from performing the duties provided in either job description.

EXAMPLE: A conductor has angina with exertion. A review of the medical evidence of record shows the claimant has chest pain which is suggestive of angina and is relieved with nitroglycerin. A review of the cardiologist's notes states that his patient is unstable and restricts him to lifting 20 pounds maximum. The employee's vocational reports states that he lifts 75 pound knuckles daily. The railroad employer submits information that the employee lifts hoses that weigh 50 pounds maximum.

here is a discrepancy in what was lifted and how much it weighed. In this situation, the employee would be precluded from lifting either amount. Therefore, these discrepancies do not need to be reconciled and the claim can be granted.

13.10.2.3 Reconciling Material Differences

Material differences will usually result from an oversight by either the applicant or the employer. Request the field office to resolve the discrepancy by first calling the parties to clarify the job information in question. If material differences still exist, the examiner should utilize OccuBrowse and other sources of job information to resolve the differences.

13.10.3 Determination Of Disability Through The Use Of ICE

Once the medical information and the job information has been reviewed using the above process, the claims examiner shall make a disability decision based on his/her assessment and understanding of the information. If the medical and job information indicate that an individual is not capable of performing the duties of his/her regular occupation, then the claimant is disabled. If the medical and job information indicates that an individual is capable of performing the duties of his/her regular railroad occupation, then the claim is denied.

13.11 Functional Capacity Tests

Functional capacity tests provide objective measures of a claimant's maximal work ability. These tests range from simple measures of lifting capacity, such as an isometric strength test, to a functional capacity evaluation (FCE) which provides a systematic,

comprehensive assessment of a claimant's overall strength, mobility, and endurance in addition to his or her functional capacity to perform physically demanding tasks, such as standing, walking, lifting, or kneeling. The tests should be performed to provide the claims examiner with evidence of how a claimant's condition affects his or her ability to perform a function.

13.11.1 Ordering a Functional Capacity Evaluation (FCE)

Disability examiners may not order a FCE without authorization from the RRB's medical consultant, CEL. CEL will request a FCE when CEL's medical professionals determine a FCE is necessary in order to make an occupational disability determination.

CEL will make their request for a FCE on Form G-137sup. In addition, they will contact the office of the Director of Disability Sickness and Unemployment Benefits Division (DSUBD) informing the Director of their request for an FCE The case will then be forwarded to the Director's office.

The Disability Initial Section Supervisor or the Disability Operations Analyst will be responsible for developing and ordering the FCE. The FCE report will be returned to the Initial Supervisor or Operations Analyst who will forward the file to the medical consultant, CEL, for the final RFC. CEL will then return the case with an RFC assessment to the Supervisor or Analyst who will enter the payment for the FCE and the consultant opinion. The file will be forwarded to the disability examiner for rating.

If a case is returned to a disability examiner by CEL requesting a FCE, and it has not been seen by the Director of DSUBD, the Initial Supervisor or the Operation Analyst, refer the case to one of them.

13.11.2 Functional Capacity Test Selection

Two categories of functional capacity tests can be used to assess the claimant's functional ability depending upon the nature of the condition(s). If the principle problem is related to lifting, a limited testing approach utilizing progressive lift tests or an isometric lift test can be used to only assess this ability. For medical conditions involving multiple body systems that could affect task performance, an FCE should be performed. Similarly, if the results of lift testing provide indeterminate results, the claimant should receive an FCE.

13.11.3 Lifting Tests

Progressive lift tests measure a person's capacity to perform lifting by presenting increasing loads for the lifting. Two progressive lift tests are recommended, the EPIC lift capacity test and the PILE. In addition, an isometric strength test can be used to assess lifting ability, but this provides more limited and less specific information than the progressive lift tests. The EPIC and PILE tests are the preferred tests to assess lifting since they involve an assessment of the person's lifting capacity in several domains. The isometric strength test is useful as a screening evaluation to provide supplemental

information and is primarily useful to provide confirmatory information for claimants who have other significant objective evidence of an underlying low back disorder.

13.11.4 Functional Capacity Evaluation

The FCE is an assessment tool that can be used to determine a person's maximal work ability. The components of an FCE include a questionnaire, interview, general musculoskeletal evaluation and physical demand tests such as lifting, squatting, walking, etc. An FCE is most useful for orthopedic conditions and not very useful for heart and lung conditions. This type of testing can also be performed for low back conditions if the results of lifting tests reveal intermediate test results where the loss is less than 50%, but greater than 25% or in cases involving multiple conditions.

13.11.5 Interpretation Of Functional Capacity Test Finding

The functional capacity tests should be integrated with other medical information from the claimant's disability evaluation. If the appropriate test criteria have been established, the test results can be utilized in the occupational disability claims evaluation process. The claimant may have received an FCE or other functional test at the request of his or her treating medical source which may be submitted as part of the medical documentation. It is important that the functional capacity test criteria meet the quality control provisions for the relevant tests. Progressive lift tests will identify the percentage of loss of lifting capacity that the claimant has compared with population norms. In addition, the testing will identify the claimant's ability to lift a specific load.

The claimant's absolute ability to lift should also be compared with the agreed upon job demands. If the claimant has received an EPIC test, the assessment includes a determination concerning the ability of the person to perform sedentary, light, medium, heavy, or very heavy work in accordance with the lifting demands identified in the Department of Labor's, Dictionary of Occupational Titles (DOT). If the claimant has received an FCE, the evaluation should include an assessment of the claimant's ability to perform work in accordance with the demand levels identified in the DOT as well as other specific demands unique to the claimant's occupation which may involve hand dexterity, stair climbing, or other physically demanding tasks not specifically addressed in the DOT classification. These other demands are not specifically assessed in progressive lift tests.

The claims examiner should assess whether the claimant's work abilities and any limitations identified by the treating medical source are consistent with the findings from functional capacity tests. If the treating medical source (s) RFC evaluation is not consistent with the ability objectively measured in a functional capacity test, the claims examiner may send the results of the functional capacity test to the treating medical source and request an opinion from the treating medical source concerning the basis for the RFC limitations. Alternatively, the claims examiner may request a CE and provide this information as part of the medical record for review. A functional capacity test may also be scheduled concurrently with a CE.

13.11.6 Quality Test Criteria

The performance of a claimant during functional capacity tests is dependent on several factors including instruction, effort, and the claimant's underlying clinical condition.

For a claims examiner to use information from a functional capacity test for an evaluation of a claimant, the test should meet the criteria identified. These criteria require that the test be performed by a qualified professional and that the claimant's effort is determined to be adequate by a trained examiner. For some tests, such as the EPIC test or an FCE, the heart rate of the claimant is required to be monitored to assure proper effort in performing the test.

Figures

Figures 1 through 5 and Table 1 can be referenced in the Occupational Disability Standards training packet.

Appendices

See 20 CFR Part, 220, Appendix 1

The following appendices contain Confirmatory Test descriptions, Disability Test descriptions, and Testing Protocols. These supplements help in evaluating medical evidence for occupational disability claims.

Many of the test results and protocols are referred to in the Tables of the Occupational Disability Standards. However, the appendices also contain information that is not included in the Tables. The information that does not relate to the Tables is useful for claims that require an Independent Case Evaluation (ICE). For example, thyroid disorder is not covered in the Tables, but if an employee claims this condition as an impairment the confirmatory test description in Appendix A, Confirmatory Test Descriptions, is available as a guide to confirm the diagnosis.

Appendix C, consists of the protocols for numerous examinations. There are some tests, however, that should **not** be requested. These tests are:

Thallium studies

CT scan and myelogram

Electromyography

Nerve conduction velocity studies

HLA-B27 assay

Tuberculosis cultures

Holter monitors

These tests are either invasive (thallium studies), have acceptable substitutes (X-ray rather than CT scan) or should be part of the medical evidence of record (tuberculosis cultures). These procotols are available as an aide to examiners when these tests are submitted as medical evidence of recor

Appendix A - Confirmatory Test Descriptions

1.0 Cancer

Confirmation: The confirmation of cancer requires that the diagnosis be confirmed by histological examination of tissue obtained from a biopsy. It is rare for a diagnosis to be confirmed without a biopsy. The examiner should evaluate the medical records and confirm the presence of a pathology report to confirm the presence of the condition. Typically the claimant will have consulted with an oncologist and an examination of the medical records from the oncologist should provide confirmatory information. A very high degree of reliance should be given to any diagnosis of cancer by an oncologist.

Distant disease: This diagnosis refers to metastatic cancer or cancer that has spread to a site distant from the original tumor. In most circumstances the prognosis for distant or metastatic cancer is very poor.

Localized disease: This diagnosis refers to cancer that is confined to the organ involved. Sometimes cancer may be localized to a small portion of the involved organ or be limited to single tissue within the organ. Persons with in situ cancer often have life spans equivalent to the general population and have no functional impairment after the removal of the tumor.

Regional disease: This diagnosis refers to cancer that is confined to the organ and surrounding lymph nodes.

2.0 Endocrine

Medical record review - Confirmation of condition and need for insulin use. This term refers to insulin dependent diabetes mellitus (IDDM). There are two principle types of diabetes mellitus: insulin requiring or insulin-dependent (IDDM) and non-insulin dependent diabetes mellitus (NIDDM). Persons with IDDM must use insulin to control their blood sugar. In persons with IDDM their diabetes is due to a lack of insulin. These persons are prone to developing ketoacidosis and small changes in their insulin dose can produce dramatic changes in blood sugar control. To confirm the presence of IDDM the medical records must contain evidence of an episode of ketoacidosis or absent or low blood insulin levels.

Persons with NIDDM have diabetes due to the development of a resistance to insulin. Many of these persons are obese and their glucose metabolism can be improved with weight reduction. Some of these persons may be treated with insulin to control their

blood sugar but do not require insulin for control and are not prone to developing ketoacidosis or ketoacidotic coma. These persons should not be considered to have insulin-dependent diabetes mellitus even though they may take insulin at some time to control their diabetes.

Medical record review - Confirmation of condition by blood test. This result pertains to thyroid disease (hyperthyroidism, hypothyroidism and thyroiditis) controlled or uncontrolled. The confirmation of the overall condition should be accomplished by verifying the presence of an abnormal blood test (thyroid hormone level or thyroid stimulating hormone level) and possible abnormal imaging studies (thyroid scan).

Most persons with thyroid disorders can readily control their condition with appropriate replacement hormone therapy or other medical treatment. The designation that a thyroid condition is uncontrolled should be made by an endocrinologist and a specific reason(s) for the lack of control should be designated. Complications of thyroid conditions can include muscle weakness, tremors, cardiac rhythm disorders and other problems. If complications remain after a course of adequate therapy, are verified by objective findings, and an endocrinologist judges the condition to be not controllable, then the thyroid condition should be considered as being uncontrolled.

3.0 Cardiac

Angiography - Definite occlusion >60% of one vessel. The minimum requirement is considered to be greater than 60% occlusion of one major coronary artery.

Cardiac catheterization - Poor global function and not coronary artery disease. This term refers to a result which shows poor global functioning of the heart that cannot be attributable to underlying coronary artery disease. This type of finding is seen with cardiomyopathy conditions.

Infarction - Proven by history. This term refers to a documented myocardial infarction or heart attack. The medical records must be reviewed for evidence of hospitalization for a myocardial infarction or heart attack. The initial medical records should be reviewed and there should be a confirmatory test finding that documents the heart attack such as elevations of cardiac enzymes on blood testing.

4.0 Respiratory

Methacholine challenge - Positive FEV_1 decrease >20% at PC $\leq$8 mg/ml. This term refers to a drop of 20% in FEV_1 with the administration of a dose of methacholine of 8 mg/ml or other equivalent method such as a histamine challenge.

Spirometry - FEV_1/FVC ratio. This is a marker of obstruction that is seen in persons with underlying asthma when they are symptomatic. Asthmatics can have normal lung function when they are asymptomatic. If they are symptomatic at the time of testing, then this finding or a diminished FEV_1 should be observed. This test result finding is not required if the person has medical records documenting the occurrence of previous

episodes of asthma. This would include a medical record demonstrating wheezing or airway obstruction that reverses with the administration of a bronchodilator.

5.0 Lumbar Sacral Spine

Electromyography - Definite denervation. Positive signs of denervation can include multiple positive sharp waves or fibrillation potentials. These findings are consistent with acute nerve root compression. Changes associated with chronic denervation include polyphasic waves. EMG changes should be correlated with distribution of symptoms and imaging study abnormalities. The presence of EMG findings in muscles unrelated to pain, symptoms in affected parts, or imaging studies abnormalities, can have minimal functional impact.

Medical record review - Documentation of failure of implant following surgical procedure. This term refers to the failure of a device implanted for correction of an underlying problem.

MRI, CAT or myelogram - Neural impingement of spinal nerves below L1. This term refers to the occurrence of central disc herniation or other pathology that causes direct pressure on the sacral cauda equina nerve roots. Cauda equina syndrome is the result. This condition can be demonstrated by either MRI, CAT or myelogram

MRI, CAT or myelogram - Significant degenerative disc changes. Degenerative changes are common in the general population and some studies report that up to 70% of asymptomatic persons over the age of 50 have degenerative back changes. Osteophytes and disc space narrowing and degeneration are common, especially in the lower lumbar spine. There are no absolute criteria representing a clear delineation between findings that are responsible for pain and those seen in asymptomatic persons. Since degenerative changes can be seen in asymptomatic persons, imaging findings should correlate with clinical findings if the findings are going to be used for evaluating impairment and disability status.

Findings that have been reported to have essentially no relevance include tropism or misorientation of the facet joints, increased lumbar lordosis, spina bifida occulta, transitional vertebra, Schmorl's nodes, and lumbosacral tilt.

MRI, CAT or myelogram - Evidence of neural compression. This term refers to evidence of degenerative disc or joint changes that result in nerve root compression. The disc or joint pathology should involve the nerve root and correlate with the person's radicular symptoms including pain, numbness, tingling, or weakness. In the lumbar spine, the exiting nerve root is named for the vertebrae about which it exists. Thus, a L5-S1 disc herniation causes impingement of an S1 nerve root. Symptoms should be checked to see if they match the nerve root distribution.

MRI, CAT or myelogram - Significant narrowing: spinal cord canal or intervertebral foramen. This term refers to significant narrowing of the spinal canal, nerve root canals, or intervertebral foramina. This condition is also known as spinal stenosis. There

should be evidence that narrowing of the canal or other structures results in compression of neurological structures and correlates with symptoms. A narrow spinal canal can be congenital or relate to degenerative changes which can result in entrapment of the spinal canal or nerve roots. Stenosis can also be classified as the basis of which segments of the spinal canal are affected (central canal, the subreticular, lateral recess or the neural foramina). Symptoms must be correlated with imaging study findings since it is possible to have findings of spinal stenosis in an asymptomatic person.

There are differences of opinion regarding the precise dimensions or size that differentiate a normal spinal canal from a canal with significant narrowing. In general when using a CAT scan to evaluate the spinal column, an anterior posterior diameter of less than 11. 5 mm (distance from the posterior surface of the vertebral body to the superior portion of the corresponding spinous process); or an interpedicular distance of less than 16 mm (transverse diameter); or a canal cross section of less than 1.45 cm are considered small. These dimensions are often provided on imaging study results. With reference to the lateral recess area, a measurement of less than 3 mm is considered small. There are no widely accepted criteria for normal dimensions of the nerve root foramina. A small spinal canal favors the occurrence of compression of intraspinal neurological structures from degenerative spinal changes.

Nerve conduction testing - Definite slowing. Confirmation of the condition requires evidence of definite slowing. This can be manifested by the absence of the H wave or by delay of 3mm/seconds. Nerve conduction slowing must be correlated with the distribution of symptoms and imaging study abnormalities. The presence of nerve conduction slowing unrelated to the pattern of pain distribution or other relevant symptoms or imaging study abnormalities can have minimal functional impact.

Physical examination - Atrophy of affected limb greater than 2 cm. The presence of muscle atrophy can be observed in the lower extremity secondary to chronic denervation or disuse because of neurologic compromise. The circumference of the involved leg should be compared to the non involved leg (above knee). Atrophy should not be able to be explained by the presence of nonspine-related problems such as contralateral hypertrophy that might occur with a dominant limb or with increased use of a limb. Atrophy should be correlated with electrodiagnostic findings (electromyography - or nerve conduction testing) where possible.

Physical examination - Straight leg raise. This is a physical examination finding that provides evidence of compression of the lumbosacral nerve roots and provides supportive evidence of a radiculopathy. The test involves raising the leg to determine if this produces symptoms of pain in distribution of the nerve root in the affected leg.

There can be false positive results with this physical examination test. There are certain physical examination findings that can be performed by an examiner to determine if the claimant's response in a straight leg test is valid. Not all examiners perform a validity check on this physical examination finding. If the medical report contains information on

tests for validity of the claimant response, then a positive finding is to be judged as more significant.

The validity criteria can include:

- Crossed opposite straight leg raise - if lifting of the leg without pain produces sciatic pain in the contralateral leg, the result is to be judged as more valid (positive contralateral straight leg raising test).

- Consistent repose to equivalent sciatic tension (stretching) - claimant response to raising leg while in the sitting position is compared to the response while supine (lying down).

- Response of claimant while supine to dorsiflexion and plantar flexion of the ankle-normally ankle dorsiflexion will relieve the pain and plantar flexion will increase the pain.

- Response of claimant while supine to hip internal and external rotation when the leg is straight - normally external rotation will decrease the complaints.

  Sensory examination - Loss of sensation in affected dermatomes. This term refers to the loss of sensation in areas of the lower limb corresponding to the distribution of the affected nerve.

6.0 Cervical Spine

Electromyography - Definite denervation. A diagnosis is established by positive signs of denervation which can include multiple positive sharp waves or fibrillation potentials. These findings are consistent with acute nerve root compromise. Changes associated with chronic denervation include polyphasic waves. EMG changes should be correlated with distribution of symptoms and imaging study abnormalities. The presence of EMG findings in muscles unrelated to pain, other relevant symptoms, or imaging studies abnormalities, can have minimal functional significance.

MRI, CAT or myelogram - Neural compression of spinal nerves. A diagnosis is established when clinical findings demonstrate evidence of a spinal curve or compromise of spinal nerves through the intervertebral foramina.

MRI, CAT or myelogram - Significant neurogenic compression. This term refers to findings that produce significant spinal cord pressure including anterior compression of the spinal cord from posterior osteophytes, posterior compression from the ligamentum flavum, especially with extension of the cervical spine, or evidence of vascular compromise of the spine by effects on spinal arteries, or from a degenerated or torn disc that has encroached on the spinal cord. Significant encroachment of the spinal canal is more prominent when there is a narrow (10 mm or less sagittal diameter) spinal canal.

MRI, CAT or myelogram - Significant disc degeneration. There are no definite criteria to define what degree of significant disc degeneration is associated with pain or impairment. It is not uncommon for asymptomatic persons to exhibit degenerative changes of the disc.

MRI, CAT or myelogram - Significant joint degeneration. There are no definite criteria to define what degree of significant joint degeneration is associated with pain or impairment. It is not uncommon for asymptomatic persons to exhibit degenerative changes of the joints.

Medical records review cervical - rheumatoid arthritis. Confirmation requires evaluation by a rheumatologist.

Medical records - Continued pain post-surgery. The claimant should have continued pain after surgery that interferes with the ability to perform occupational activities. The claimant is not responsive to conservative therapy including medications or physical therapy for at least one year after surgery.

Medical records - Radicular pain. This term refers to pain in the distribution of the affected nerve root. Radicular pain should be correlated with imaging study findings.

Nerve conduction testing - Definite slowing. Confirmation of the diagnosis requires evidence of definite slowing. Slowing is manifested by the absence of the H wave or by delay of 3mm/seconds. Nerve conduction slowing should be correlated with the distribution of symptoms and imaging study abnormalities. The presence of nerve conduction slowing of nerves unrelated to the pattern of pain distribution, other relevant symptoms, or imaging study abnormalities, have minimal functional significance.

Physical examination - Atrophy of affected arm greater than 2 cm. A diagnosis is established by the presence of muscle atrophy that can be observed in the upper extremity secondary to chronic denervation or disuse because of neurologic compromise. The circumference of the involved arm should be compared to the non involved arm (above elbow). Atrophy should not be able to be explained by the presence of non spine-related problems such as contralateral hypertrophy that might occur with a dominant limb or with greatly increased use of a limb. Atrophy should be correlated with an electrodiagnostic finding (electromyography -or nerve conduction testing) when possible.

Physical examination - Evidence of myelopathy. Myelopathy is a condition caused by compression of the spinal cord which can involve both upper and lower motor neurons. Compression can be due to several factors including both disc herniation and/or compression from degenerative bony changes involving the cervical spinal joints and surrounding structures. The diagnosis requires confirmation by imaging studies including CAT, MRI or myelogram.

Upper motor neuron findings involve lower extremities and can produce symptoms of spasticity, increased deep tendon reflexes, and a positive Babinski test (not all may be

present at same time). These are also called long tract signs. Some persons can also exhibit a stooped wide-based gait or jerky gait.

Lower motor neuron involvement affects the upper extremity and results in weakness of the upper extremity. The distribution of weakness is dependent upon which nerve root is affected. Lesions at the C4-5 disc level involve the C5 nerve root and can produce deltoid weakness, shoulder abduction problems, and a loss of the biceps reflex. Lesions at the C5-6 disc level affect the C6 nerve root can cause weakness of the biceps, elbow flexion and forearm supination, and wrist extension. A C6-7 disc lesion affecting the C7 nerve can produce weakness of elbow extension, as well as finger and wrist extension. A lesion at the C7-T1 disc can involve the C8 nerve and produce both weakness of elbow extension and finger flexion.

7.0 Shoulder

Medical record review - Condition with permanent functional limitations. This term refers to the presence of an underlying medical condition that has produced a permanent impairment of the elbow, e.g., a permanent angular deformity of the elbow following a fracture, or limitation of range of motion following a traumatic injury involving the joint. This abnormality should be confirmed with an imaging study.

8.0 Hand And Arm

Medical record review - Documentation of medical condition for permanent limitation. This term refers to the presence of an underlying medical condition that has produced a permanent impairment of the wrist, hand or thumb. This condition should be confirmed with an imaging study.

Nerve conduction studies - Definite median nerve conduction slowing at wrist.

Physical examination - Definite reproducible evidence of limitation. This term refers to the presence of a physical finding that is measured consistently (or reliably) by different qualified medical examiners.

9.0 Hip

Alkaline phosphatase - Increased up to 50 times. This term refers to a blood test finding.

10.0 Knee

The terms are self-explanatory.

11.0 Ankle And Foot

The terms are self-explanatory. All reports should include the name and signature of the medical source reading the test.

- The name of the technician administering the test should appear on the report.

Appendix B - Disability Test Descriptions

1.0 Cancer

Category 1. Conditions which are identified as Category 1 are classified as being disabling. These conditions either have a poor prognosis (in general < 50% 5-year survival rate) or the treatment required for the condition is associated with significant impairments which would make it impossible for the railroad employee to perform the job.

Category 2. Category 2 conditions represent an intermediate group for which an individual determination is required. In general, conditions that have extensive local spread or more aggressive histopathology are more likely to be considered as disabling while those with more differentiated tumors (in general, less aggressive growth potential) and minimal local extension are more likely to be classified as a nondisabling.

Category 3. Category 3 conditions are considered as being nondisabling. Persons with these conditions generally have a life span that is similar to that of the general population with minimal impact on daily activities or ability to perform occupational tasks.

2.0 Endocrine

The terms are self-explanatory.

3.0 Cardiac

The terms are self-explanatory.

4.0 Respiratory

PO_2 - arterial. No specific cut-off level is provided for PO_2 which would result in a "D" classification since other measures are thought to better represent an indication of disability status. Other factors can also affect the arterial PO_2 including altitude, breath holding, and obesity. Exercise capability is thought to correlate better with FEV_1 than PO_2. However, an arterial PO_2 of <60 mm Hg in an claimant breathing room air (at sea level) with a confirmed lung condition provides strong evidence of severe pulmonary impairment. Such a claimant would be unlikely to be able to perform physically demanding work.

5.0 Lumbar Sacral Spine

Lifting capacity diminished by 50%. This term refers to a decrease in lifting capacity by 50% using a valid measure of lifting capacity.

No specific test or "gold standard" is available for measuring lifting capacity. Several tests can be used for this type of assessment and each method has its own particular limitations. Several factors can affect the lifting capacity of the worker other than musculoskeletal capacity or strength. Limiting factors may include fear or anxiety about the test or unclear instructions. For a test to be a valid predictor of lifting capacity, these factors need to be assessed as part of the quality control procedure. These tests have been selected based upon the following criteria:

MRI, CAT, myelogram - Significant narrowing of the spinal canal. This term refers to spinal stenosis which has been defined as narrowing of the spinal canal, nerve root canals, or intervertebral foramina. For a diagnosis to be confirmed, there should be evidence that the narrowing of the canal results in compression of neurological structures and is correlated with symptoms of the affected dermatomes. A narrow spinal canal can be congenital or be related to degenerative changes resulting in entrapment of the spinal canal or nerve roots. Stenosis can also be classified on the basis of which segments of the spinal canal are affected (central canal, the subreticular, lateral recess or the neural foramina).

There are differences of opinion regarding the precise dimensions or size that differentiate a normal spinal canal and a canal with significant narrowing. When using a CAT scan to evaluate the spinal column, an anterior posterior diameter of less than 11.5 mm (distance from the posterior surface of the vertebral body to the superior portion of the corresponding spinous process) an interpedicular distance of less than 16 mm (transverse diameter), or a canal cross section of less than 1.45 cm are considered small. With reference to the lateral recess area, a measurement of less than 3 mm is considered small. There are no widely accepted criteria for normal dimensions of the nerve root foramina. A small spinal canal favors the occurrence of compression of intraspinal neurological structures from degenerative spinal changes.

Symptoms should be correlated with imaging study findings since it is possible to have findings of stenosis in asymptomatic persons.

MRI, CAT, myelogram - Significant compression of the dural sac. This term refers to the presence of a compression of the dural sac which results in spinal cord or nerve root compression. There must be correlating symptoms in the appropriate distribution of the nerve root. The presence of correlating electrodiagnostic findings (EMG or NCV) provides strong supportive evidence in establishing the diagnosis. This finding in the presence of a narrow spinal canal can also be considered as significant narrowing - spinal canal.

MRI, CAT, myelogram - Significant narrowing of the intervertebral foramen. This condition is the presence of a narrow intervertebral foramen that could produce impingement of a nerve root. There must be correlating symptoms in the appropriate distribution of the nerve root. The presence of correlating electrodiagnostic findings (EMG or NCV) provide strong supportive evidence of confirmation of the diagnosis. This finding in the presence of a narrow spinal canal can also be considered as significant narrowing - spinal canal.

MRI, CAT, myelogram - Disc extrusion with neural impingement. This condition is the presence of a disrupted disc that has resulted in direct impingement of a nerve root. To confirm the diagnosis and result in a "D" determination, there must be correlating symptoms in the appropriate distribution of the nerve root. The presence of correlating electrodiagnostic findings (EMG or NCV) provides strong supportive evidence of the diagnosis. This finding, in the presence of a narrow spinal canal, could also be considered to be classified as significant narrowing - spinal canal.

Medical record review - Frequent flare-ups with objective findings. This term refers to evidence of repeated infections over the past three years with corresponding blood findings demonstrating chronic infection, abnormal bone scan findings showing increased uptake consistent with active infection, and/or positive bacterial cultures requiring antibiotic therapy (usually intravenous and requiring hospitalization).

Physical examination - Lower extremity weakness. This term refers to the presence of lower extremity weakness due to neurogenic compression of spinal canal or nerves that significantly interferes with gait or ability to use lower limb. To establish a diagnosis, there should be correlating imaging study findings demonstrating pathological correlation in the spinal canal to account for the weakness and the underlying electrodiagnostic findings. There should be demonstrated atrophy in the affected limb.

X-ray flexion/extension - Segmental instability. This term means the flexion and extension comparison roentgenograms showing significant injury-related anterior-to-posterior translation of two adjacent vertebral bodies of 5 mm or more.

6.0 Cervical Spine

MRI, CAT, or myelogram - Significant spinal cord pressure. Imaging findings that can account for significant spinal cord pressure include anterior compression of the spinal cord from posterior osteophytes, posterior compression from the ligamentum flavum, especially with extension of the cervical spine, evidence of vascular compromise of the spine by effects on spinal arteries, or from a degenerated or torn disc that has encroached on the spinal cord. Significant encroachment of the spinal canal is more prominent when there is a narrow spinal canal (10 mm or less sagittal diameter).

Multilevel - Neurologic compromise. This condition is muscle weakness involving more than one nerve segment. Muscle weakness should be confirmed with appropriate imaging study findings (the presence of radiological evidence of confirming lesion, i.e., disc spur, etc. involving appropriate nerve segment innervating the muscle group responsible for the weakness). Ideally,

electromyographic or nerve conduction study findings should provide confirmatory electrodiagnostic evidence. Isolated radiological findings have little significance.

Physical examination - Lower extremity weakness and/or significant spasticity. The examiner should demonstrate the presence of weakness or spasticity in a claimant with confirmed compression of the spinal cord. The presence of associated gait problems

makes these findings more disabling. These findings should be correlated with imaging study findings of significant spinal cord pressure. Without confirmatory findings on imaging studies, the presence of these physical findings should not be considered disabling.

7.0 Shoulder

The terms are self-explanatory.

8.0 Hand And Arm

The terms are self-explanatory.

9.0 Hip

The terms are self-explanatory.

10.0 Knee

Physical examination - Valgus deformity, 16-20 degrees. Deformity measured by femoral-tibial angle; 3 degrees to 10 degrees valgus is considered normal.

Physical examination - Valgus deformity, 8-12 degrees. Deformity measured by femoral-tibial angle; 3 degrees to 10 degrees valgus is considered normal.

X-ray of knee. X-rays of the knee should be taken in the standing position.

11.0 Ankle And Foot

X-ray - Ankle 0 mm. This term refers to absence of joint space from degenerative changes. The normal cartilage interval is 4 mm.

X-ray - Talonavicular joint 0 mm or 1 mm. This term refers to the joint space of the talonavicular joint. This joint space is typically between 2 - 3 mm. The ankle should demonstrate some associated degenerative changes.

Appendix C - Test Protocols

Protocol For Progressive Lift Tests

Two progressive lift tests are recommended for the RRB disability assessment: EPIC and PILE. The following procedures should be followed with respect to the administration of these tests:

The person undergoing testing should have medical authorization prior to performing the test.

The health professional administering the test should have completed an approved course of training for the test and demonstrate an acceptable level of proficiency.

The facility must have the appropriate equipment to administer the test.

The written test protocol contained in the examiner or administration manual for the test must be followed.

The examiner must assess and report the examinee's test results using the criteria specified by the test designed and the test-specific protocols.

Written reports must follow the procedures described in the test-specific protocols.

The final report should include a ranking of the subject against population norms and must include a statement concerning the evaluator's assessment of the subject's efforts in performing the test.

Isometric Strength Lift Test Protocol

The RRB recommends an isometric strength lift test as part of a protocol to assess the functional capacity of an individual. There are several recommended test protocols that have been published in the peer-reviewed literature for this type of test. The RRB recommends that the Zeh test protocol be used for assessing isometric strength lifting capacity (Zeh J, Hansson T, Bigos S, Spengler D, Battie M, Wortley M. (1986) Isometric strength testing: recommendations based on a statistical analysis of procedure. Spine. 11(1): 43-46).

The Zeh protocol limits the number of exertions or lifts that the subject must perform and minimizes the risk of injury associated with lifting. An isometric lift test is less comprehensive and specific than a complete Functional Capacity Evaluation (FCE). If there are minimal findings or there is an impairment of other body parts or systems, then the FCE should be considered as the initial test requirement.

The following parameters should be followed for all isometric strength tests performed by the RRB:

The University of Michigan strength test system or equivalent should be used. (Chaffin D, Herrin GD, Keyserling WM. (1978) Preemployment strength testing: An updated position*. J. Occu Med.* 20: 403-408).

Lift should be measured in arm, leg or squat, and torso. One lift maneuver should be performed for each position.

Instructions to the claimant should be objective, with no emotional appeal.

Subjects should be asked to increase exertion during the first 2 seconds, then hold steady for 3 more seconds.

Subjects should not be given specific test results to compare with norms or with other volunteers' performances.

Other influences on performance (e.g., noise, spectators) should be minimized.

The final report should include a ranking of the subject against population norms and must include a statement concerning the evaluator's assessment of the subject's effort in performing the test.

Subjects should be instructed to discontinue the test in case of any physical discomfort.

Authorization from a treating or board-appointed examining medical source should be obtained prior to the testing procedure.

The value of the isometric lift test can be increased by increasing the numbers of lifts. The number of lifts can be increased to two lifts for each position upon recommendation of the board-appointed examining medical source or with approval of the treating medical source(s).

Instructions For Thallium Studies

Thallium study (nuclear myocardial perfusion) is a nuclear medicine technique used to measure the viability of heart muscle. It is usually done in conjunction with an exercise protocol to stress the heart muscle (medications can also be used to stress the heart muscle without physical exercise.)

The following guidelines should be adhered to when conducting and reporting on the thallium (myocardial perfusion) imaging study:

Provide the date of testing

An exercise protocol should be indicated on the report (e.g. Bruce protocol) and the percent of maximum heart rate should be reported.

The thallium should be injected at peak exercise (usually 1 minute prior to cessation of exercise).

The dose of the thallium injected should be reported.

Imaging studies should be done immediately to assess the "exercise" portion of the study. A "redistribution" imaging study should be obtained 3-4 hours later, anterior, left anterior oblique (45 degrees) and left lateral views should be obtained for each imaging study.

The results should be interpreted by a board certified nuclear medicine medical source and include comments on lung activity, distribution and if any abnormalities are reversible or non-reversible.

The medical source's name and signature should appear on the report.

Instructions For Holter Monitoring (Ambulatory Electrocardiograph)

The Holter monitor records the heart's electrical activity through electrodes placed on the chest over a 24 to 48 hour period. The electrical impulses are then transmitted to an amplifier, which records them on a small magnetic tape recorder for later review by the medical source.

The following guidelines must be adhered to when conducting and reporting on Holter monitoring:

Ambulatory electrocardiographs use a bipolar lead system. Generally, the leads of a two-channel system approximate lead V_1, and V_2. The lead configuration should be indicated on the report.

The patient should be required to complete a diary card for the duration of the test. On this card the patient should record his/her activities and symptoms during the monitoring period.

The technician will then correlate the electrical activity with the symptoms and activities reported on the card.

The date of recording must be provided.

The date of analysis must be provided.

The length of the recording must be reported and must be for at least a 24 hour period.

A comment on the quality of the scan should be included with the report.

Any abnormal findings (e.g., abnormal rhythm, ectopic beats, etc.) should be indicated as well as any associated symptoms experienced by the patient.

If any abnormalities are noted on the 24-hour Holter monitor, correlation to existing disease should be commented on.

The name of the technician scanning the initial readings should be indicated.

All reports should be signed and dated by the medical source.

The medical source interpreting the results should be a board certified cardiologist.

Instructions For CT And Myelograms

CT and myelograms are common imaging studies used to assess the anatomy of the lumbar spinal canal, the knee, shoulder and wrist.

The following guidelines must be adhered to when conducting and reporting on CT and myelograms:

Provide date of exam.

All CT scans and myelograms should be read by a board certified radiologist. The radiologist's name and signature should appear on the dictated report.

CT cuts should be made no wider than 0.5 cm. When evaluating low back pain, the cuts should be made parallel to the vertebral endplates.

Myelography and CT-myelography should use a water-based contrast media, not oil based.

The technical protocols for these imaging tests should be described on the radiologist reports.

Instructions For Spinal Instability X-Rays

Spinal instability X-rays are X-rays of the cervical, thoracic and lumbar spine done in full flexion and extension views. These are functional studies which are designed to demonstrate motion or lack of motion of the spinal vertebrae.

The following guidelines should be adhered to when conducting and reporting on spinal instability X-rays:

Provide date of examination.

A description of the vertebral bodies should be included with the report. Particularly, the report should comment on any disk space narrowing and alignment of the vertebral canal.

The medical source's name and signature should appear on the report.

Instructions For Electromyography (EMG)

Electromyography is used to assess neurologic dysfunction. The overall diagnostic objectives of this test is to assess suspected myelopathy (dysfunction of the spinal cord), radiculopathy (dysfunction of a spinal nerve root), neuropathy (dysfunction of a peripheral nerve at a distance the nerve root), and myopathy (muscle abnormalities).

The following guidelines should be adhered to when reporting on EMG studies:

Provide the date of testing.

- The muscles being tested should be included in the report.
- Electrical activity of the muscle(s) being tested at rest, on needle insertion and during contraction should be reported.
- Recruitment patterns and drop-outs of motor unit potentials should be reported.
- The medical source's name and signature should appear on the report.

Instruction For Nerve Conduction Velocity Studies

Nerve conduction studies are tests of peripheral nerves performed by stimulating the nerve at one point and measuring the action potential either at another point along the nerve (sensory conduction) or of the muscle innervated by the nerve (motor conduction).

The following guidelines should be adhered to when conducting and reporting on nerve conduction velocity studies:

Provide the date of testing.

The nerve being tested should be indicated as well a any latency in the conduction times (in milliseconds). Normal values should be included for comparison.

An assessment by the reviewing neurologist should be included in the report.

The neurologist's name and signature should appear on the report.

Instructions For HLA-B27 Assay

HLA-B27 is a serologically defined allele of the human HLA-B locus. The presence of the HLA-B27 antigen strongly suggests ankylosing spondylitis and related disorders.

The following guidelines must be adhered to when conducting and reporting on HLA-B27 assays:

Samples must be received within 48 hours of collection.

Prior to analyzing any samples, instrument quality control should be performed using negative control samples. Positive controls should also be used. Any quality control results that indicate a failure should be recorded and action taken.

Results should be reported as negative or positive.

The name of the technical supervisor or medical director should appear on the report.

Instructions For Tuberculosis Cultures

Many laboratories have adopted the recommendations to use rapid acid-fast bacilli (AFB) smears, growth detection (i.e., primary culture), identification, and drug-susceptibility testing for M tuberculosis.

The following guidelines must be adhered to when conducting and reporting on AFB smears and primary tuberculosis cultures:

The regulations implementing the 1988 Clinical Laboratory Improvement Amendments (CLIA) require all laboratories that perform any mycobacteriology testing to enroll in federally approved proficient testing (PT) programs.

It is important to identify which category the laboratory reporting the results falls into:

AFB smears performed and all specimens for primary culture referred to another laboratory.

AFB smears and primary cultures for M tuberculosis performed, but all AFB positive culture isolates referred for organism identification and drug-suspectibility tests.

AFB smears and primary culture with identification of M tuberculosis isolates performed but referred to drug-susceptibility testing.

AFB smears, primary culture, identification and drug susceptibility testing for M tuberculosis performed.

Rapid laboratory testing to identify and determine the drug susceptibility of M tuberculosis isolates is vital to effective diagnosis, treatment and control of TB.

Liquid culture method should be used in order to decrease the time required to detect and solate mycobacterium, as well as increase the sensitivity of the culture to M tuberculosis.

Results should be reported as negative or positive. If result is positive, sensitivities of the culture to certain antibiotics should also be reported.

Name of supervising microbiologist should be on the report.

Instructions For Multiple Sleep Latency Testing (MSLT)

MSLT is the only scientifically validated objective test of excessive sleepiness. The MSLT is used to establish a diagnosis of specific sleep disorders or to determine the severity of sleepiness.

For correct interpretation, the MSLT must be performed under appropriate conditions and requires accurate technique. The following guidelines must be adhered to when

conducting and reporting on multiple sleep latency tests. The following protocols are accepted by the American Sleep Disorders Association.

For correct interpretation, the MSLT must be performed following an all night polysomnogram to provide accurate documentation of the proceeding nights sleep.

MSLT are routinely performed at 2 hour intervals, beginning 1.5 to 3 hours after the end of the nocturnal recording.

The testing bedrooms should be quiet and dark and intermitted noises (e.g. elevator, toilet, sirens) that are likely to abort sleep onset should be avoided. If such noises are unavoidable, the noise should be documented on the polysomnographic chart recording.

The light level in the bedroom should be very low and should not vary with the time of day.

Room temperature should be kept constant.

- The patient/subject should be prohibited from ingesting alcohol or caffeine on the day of the test.
- Since the study may be influenced by sleep for up to 7 nights beforehand, the patient should have completed sleep diary forms for 1-2 weeks prior to the sleep study.
- The MSLT should consist of five nap opportunities in order to determine both severity of sleepiness and presence of two or more sleep onset rapid eye movement (REM) period for the diagnosis of narcolepsy.
- A 4-hour nap test may be performed for determination of excessive sleepiness, but this test is not reliable for the diagnosis of narcolepsy unless at least two sleep onset REM periods have occurred.
- Sleep onset should be determined by the first epoch of any stage of sleep, including stage 1 sleep.
- The absence of sleep on any nap opportunity should be recorded as a sleep latency of 20 minutes.
- The MSLT report should include the onset and offset time of each nap, latency from lights out to the first epoch of sleep, amount of each sleep stage, total sleep time, mean lateness to sleep of all naps and number of sleep onset REM periods.
- All reports should include the name and signature of the medical source reading the test.
- The name of the technician administering the test should appear on the report.