



CIGNA MEDICAL COVERAGE POLICY

The following Coverage Policy applies to all plans administered by CIGNA Companies including plans administered by Great-West Healthcare, which is now a part of CIGNA.

**Subject Magnetic Resonance
Neurography**

Effective Date 3/15/2009
Next Review Date 3/15/2010
Coverage Policy Number 0316

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Hyperlink to Related Coverage Policies

Electromyography Studies
Nerve Conduction Velocity Studies Including
Late Response (H-reflex and F-wave)

INSTRUCTIONS FOR USE

Coverage Policies are intended to provide guidance in interpreting certain **standard** CIGNA HealthCare benefit plans as well as benefit plans formerly administered by Great-West Healthcare. Please note, the terms of a participant's particular benefit plan document [Group Service Agreement (GSA), Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Policies are based. For example, a participant's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Policy. In the event of a conflict, a participant's benefit plan document **always supercedes** the information in the Coverage Policies. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable group benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Policies and; 4) the specific facts of the particular situation. Coverage Policies relate exclusively to the administration of health benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. Proprietary information of CIGNA. Copyright ©2009 CIGNA

Coverage Policy

CIGNA does not cover magnetic resonance neurography because it is considered experimental, investigational or unproven.

General Background

The diagnosis and management of disorders involving peripheral nerves relies upon information derived from a patient's clinical history, neurological examination, and electrodiagnostic studies, including nerve conduction studies and electromyography (EMG). Magnetic resonance neurography (MRN) is a magnetic resonance image (MRI) modified with special software and hardware upgrades to generate a high resolution longitudinal and cross-sectional image of major peripheral nerves.

Literature Review

Filler et al. (2005) prospectively evaluated 239 consecutive patients with sciatica in whom standard diagnosis and treatment had failed to effect improvement. Patients without adequate lumbar spine imaging data obtained within the past 12 months underwent updated spinal radiography and MRI. When a diagnosis could not be established by inspecting routine spine imaging, patients were referred for lumbar and pelvic soft-tissue MRI and MRN evaluation. Patients in whom physical examination findings and medical history were consistent with piriformis syndrome and in whom MRN did not rule out piriformis syndrome were considered to have probable piriformis syndrome and were referred for injection. The sensitivity of MRN compared with other MR imaging

techniques or other diagnostic imaging modalities is not known, as MRN was not compared with other MR imaging techniques or other diagnostic imaging modalities.

Summary

No professional society has published positions or guidelines addressing this technology. Evidence in the published, peer-reviewed scientific literature is primarily in the form of review articles and small population case series and case studies. Data are not sufficient to permit any conclusions regarding the efficacy of MRN in the diagnosis or management of peripheral nerve disorders. Studies comparing MRN to conventional work up of clinical exam, nerve conduction studies and electromyography (EMG), are lacking.

Well-designed, large population, randomized, controlled studies are needed to supply sufficient evidence of diagnostic utility and to establish the appropriate clinical applications of MRN when used either as a single diagnostic tool or in conjunction with other examinations, including other MR imaging techniques and magnet strengths. The role of MRN in the diagnosis and management of peripheral nerve disorders is unknown at this time.

Coding/Billing Information

Note: This list of codes may not be all-inclusive.

Experimental/Investigational/Unproven/Not Covered:

CPT* Codes	Description
76498 [†]	Unlisted magnetic resonance procedure (e.g. diagnostic, interventional)

†Note: Experimental, investigational, unproven and not covered when used to report magnetic resonance neurography.

ICD-9-CM Diagnosis Codes	Description
355.0	Lesion of sciatic nerve
724.3	Sciatica
	All codes

*Current Procedural Terminology (CPT®) ©2008 American Medical Association: Chicago, IL.

References

1. Bendszus M, Stoll G. Technology insight: visualizing peripheral nerve injury using MRI. *Nat Clin Pract Neurol*. 2005 Nov;1(1):45-53. Review.
2. Filler AG, Haynes J, Jordan SE, Prager J, Villablanca JP, Farahani K, et al. Sciatica of nondisc origin and piriformis syndrome: diagnosis by magnetic resonance neurography and interventional magnetic resonance imaging with outcome study of resulting treatment. *J Neurosurg Spine*. 2005 Feb;2(2):99-115.
3. Filler AG, Maravilla KR, Tsuruda JS. MR neurography and muscle MR imaging for image diagnosis of disorders affecting the peripheral nerves and musculature. *Neurol Clin*. 2004 Aug;22(3):643-82, vi-vii.
4. Grant GA, Goodkin R, Maravilla KR, Kliot M. MR neurography: diagnostic utility in the surgical treatment of peripheral nerve disorders. *Neuroimaging Clin N Am*. 2004 Feb;14(1):115-33.

Policy History

Pre-Merger Organizations	Last Review Date	Policy Number	Title
CIGNA HealthCare	3/15/2008	0316	Magnetic Resonance Neurography

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Connecticut General Life Insurance Company has acquired the business of Great-West Healthcare from Great-West Life & Annuity Insurance Company (GWLA). Certain products continue to be provided by GWLA (Life, Accident and Disability, and Excess Loss). GWLA is not licensed to do business in New York. In New York, these products are sold by GWLA’s subsidiary, First Great-West Life & Annuity Insurance Company, White Plains, N.Y.