

**Medical Review Guidelines
Magnetic Resonance Imaging - Brain**

Medical Guideline Number: MRG2001-03

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OHCA Reference OAC 317:30-5-24. Radiology. (f) *Magnetic Resonance Imaging. MRI /MRA scans are covered when medically necessary. Documentation in the progress notes must reflect medical necessity for the MRI.*

Description:

MRI is a noninvasive diagnostic scanning technique of representing the distribution of water and other hydrogen-rich molecules in the body in the absence of ionizing radiation and in the presence of a powerful, highly uniform, static magnetic field. MRI is useful in examining the head and central nervous system abnormalities.

HCPCS CODES

70551	Magnetic resonance (e.g., proton) imaging, brain (including brain stem); without contrast
70552	Magnetic resonance (e.g., proton) imaging, brain (including brain stem); with contrast
70553	Magnetic resonance (e.g., proton) imaging, brain (including brain stem) -- without contrast material, followed by contrast material(s) and further sequences
70557	Magnetic resonance imaging, brain, during open intracranial procedure (e.g. to assess for residual tumor or residual vascular malformation); without contrast material
70558	Magnetic resonance imaging, brain, during open intracranial procedure (e.g. to assess for residual tumor or residual vascular malformation); with contrast material
70559	Magnetic resonance imaging, brain, during open intracranial procedure (e.g. to assess for residual tumor or residual vascular malformation); without contrast material, followed by contrast material, and further sequences

COVERED ICD-9 CODES

006.5	Amebic brain abscess
013.00-013.46	Tuberculosis of meninges and central nervous system
013.50-013.56	Tuberculous abscess of spinal cord
013.60-013.66	Other specified/unspecified tuberculosis of central nervous system
013.80-013.96	Other specified and unspecified tuberculosis of central nervous system
015.60-015.76	Tuberculosis mastoiditis and tuberculosis of other specified bone
017.20-017.56	Tuberculosis of other organs (peripheral lymph nodes, eye, ear, thyroid gland)
036.0-036.1	Meningococcal meningitis/encephalitis
036.2	Meningococemia
036.3	Waterhouse-Friderichsen syndrome, meningococcal
038.0-038.9	Septicemia
042	Human immunodeficiency virus (HIV) disease
045.00-045.23	Acute poliomyelitis
045.90-045.93	Acute poliomyelitis, unspecified
046.0-046.8	Slow virus infection of central nervous system
046.9	Unspecified slow virus infection of central nervous system

047.0-047.8	Meningitis due to enterovirus
047.9	Unspecified viral meningitis
048	Other enterovirus diseases of central nervous system
049.0-049.8	Other non-arthropod borne viral diseases of central nervous system
049.9	Unspecified non-arthropod borne viral diseases of central nervous system
052.0	Postvaricella encephalitis
053.0	Herpes zoster with meningitis
053.10-053.19	Herpes zoster with other nervous system complications
054.3	Herpetic meningoencephalitis
054.40-054.49	Herpes simplex with ophthalmic conditions
054.72	Herpes simplex meningitis
055.0	Post-measles encephalitis
056.00	Rubella with unspecified neurological complication
056.01	Encephalomyelitis due to rubella
056.09	Rubella with other neurological complications
056.79	Rubella with other specified complications
062.0-062.9	Mosquito-borne viral encephalitis
063.0-063.9	Tick borne viral encephalitis
064	Viral encephalitis transmitted by other and unspecified anthropods
066.40-066.49	West Nile fever
071	Rabies
072.1	Mumps meningitis
072.2	Mumps encephalitis
078.5	Cytomegaloviral disease
079.51	Human T-cell lymphotropic virus, type I (HTLV-I)
079.99	Unspecified viral infection
090.40-090.49	Juvenile neurosyphilis
091.81	Acute syphilitic meningitis (secondary)
094.0-094.3	Neurosyphilis
094.81-094.89	Other specified neurosyphilis
094.9	Neurosyphilis unspecified
100.81	Leptospiral meningitis (aseptic)
112.83	Candidal meningitis
114.2	Coccidioidal meningitis
115.01	Histoplasma capsulatum meningitis
115.11	Histoplasma duboisia meningitis
115.91	Histoplasmosis, meningitis unspecified
117.3	Aspergillosis
117.5	Cryptococcosis
118	Opportunistic mycoses
123.1	Cysticercosis
124	Trichinosis
130.0	Meningoencephalitis due to toxoplasmosis
135	Sarcoidosis
136.9	Unspecified infectious and parasitic diseases
137.1	Late effects of central nervous system tuberculosis
139.0	Late effects of viral encephalitis
142.0	Malignant neoplasm, parotid gland
149.1	Malignant neoplasm of Waldeyer's ring
150.0-150.9	Malignant neoplasm of esophagus
153.0-153.9	Malignant neoplasm of colon
160.0-160.9	Malignant neoplasm of nasal cavities, middle ear, and accessory sinuses
162.0-162.5	Malignant neoplasm of trachea, bronchus, and lung
162.8	Malignant neoplasm of other parts of bronchus or lung
162.9	Malignant neoplasm of bronchus and lung, unspecified
170.0-170.1	Malignant neoplasm of bone and articular cartilage

170.9	Malignant neoplasm of bone and articular cartilage, site unspecified
171.0	Malignant neoplasm of connective tissue and other soft tissue of head, face, and neck
171.8-171.9	Malignant neoplasm of connective tissue and other soft tissue, other specified sites and site unspecified
172.0-172.9	Malignant melanoma of skin
174.0-174.9	Malignant neoplasm of female breast
175.0-175.9	Malignant neoplasm of male breast
180.9	Malignant neoplasm, cervix uteri, unspec.
183.0	Malignant neoplasm, ovary
186.9	Malignant neoplasm of testis, other and unspec.
188.9	Malignant neoplasm, bladder, part unspec.
189.0-189.1	Malignant neoplasm of kidney and renal pelvis
189.3	Malignant neoplasm, urethra
190.0	Malignant neoplasm of eyeball, except conjunctiva, cornea, retina, and choroid
190.1	Malignant neoplasm of orbit
190.2-190.9	Malignant neoplasm of eye
191.0-191.9	Malignant neoplasm of brain
192.0	Malignant neoplasm of cranial nerves
192.1	Malignant neoplasm of cerebral meninges
192.2-192.3	Malignant neoplasm of spinal cord and spinal meninges
192.8	Malignant neoplasm of other specified sites of nervous system
193	Malignant neoplasm, thyroid gland
194.0	Malignant neoplasm, adrenal gland
194.3-194.6	Malignant neoplasm of pituitary gland, pineal gland, carotid body and aortic body
195.0	Malignant neoplasm of head, face, and neck
195.1	Malignant neoplasm, thorax
196.0	Secondary and unspecified malignant neoplasm of lymph nodes of head, face, and neck
197.0	Secondary malignant neoplasm of lung
198.3-198.5	Secondary malignant neoplasm of other specified sites
199.0	Malignant neoplasm (disseminated)
199.1	Other malignant neoplasm of unspecified site
200.00-200.01	Reticulosarcoma; unspecified site, extranodal and solid organ sites and lymph nodes of head, face, and neck
200.10-200.11	Lymphosarcoma; unspecified site, extranodal and solid organ sites and lymph nodes of head, face, and neck
200.20-200.21	Burkitt's tumor or lymphoma; unspecified site, extranodal and solid organ sites and lymph nodes of head, face, and neck
200.80-200.81	Lymphosarcoma and reticulosarcoma, other named variants; unspecified site, extranodal and solid organ sites and lymph nodes of head, face, and neck
201.00-201.98	Hodgkin's disease
202.00-202.98	Other malignant neoplasm of lymphoid and histiocytic tissue
203.00-203.81	Multiple myeloma and immunoproliferative neoplasms; without mention of remission and in remission
205.00-205.81	Myeloid leukemia; without mention of remission and in remission
205.82	Other myeloid leukemia, in relapse
205.90-205.91	Unspecified myeloid leukemia; without mention of remission and in remission
205.92	Unspecified myeloid leukemia, in relapse
208.80-208.91	Leukemia of unspecified cell type; without mention of remission and in remission
208.92	Unspecified leukemia, in relapse
212.0-212.1	Benign neoplasm of nasal cavities, middle ear
213.0	Benign neoplasm of bones of skull and face
213.9	Benign neoplasm of bone and articular cartilage, site unspecified
215.0	Other benign neoplasm of connective and other soft tissue of head, face, and neck
224.1	Benign neoplasm of orbit
225.0	Benign neoplasm of brain

225.1	Benign neoplasm of cranial nerves
225.2	Benign neoplasm of cerebral meninges
225.3-225.9	Benign neoplasm of brain and other parts of nervous system
227.3-227.6	Benign neoplasm of pituitary gland, pineal gland, carotid body and aortic body
228.02	Hemangioma of intracranial structure
237.0	Neoplasm of uncertain behavior of pituitary gland
237.1-237.2	Neoplasm of uncertain behavior of penal gland or adrenal
237.3	Neoplasm of uncertain behavior of paraganglia
237.4	Neoplasm of uncertain behavior of other and unspecified endocrine glands
237.5	Neoplasm of uncertain behavior of brain and spinal cord
237.6	Neoplasm of uncertain behavior of meninges
237.70	Neurofibromatosis, unspecified
237.71-237.72	Neoplasm of uncertain behavior, Neurofibromatosis Type I; Type II
237.9	Neoplasm of uncertain behavior of other and unspecified parts of nervous system
238.0	Neoplasm of uncertain behavior of bone and articular cartilage
238.1	Neoplasm of uncertain behavior of connective and other soft tissue
238.4	Polycythemia vera
238.5	Neoplasm of uncertain behavior of histiocytic and mast cells
238.8	Neoplasm of uncertain behavior of other specified sites
239.2	Neoplasms of unspecified nature of bone soft tissue and skin
239.6	Neoplasm of unspecified nature, brain
239.7	Neoplasms of unspecified nature, endocrine glands and other parts of nervous system
239.81	Neoplasm of unspecified nature, retina and choroid
239.89	Neoplasm of unspecified nature, other specified sites
251.0	Hypoglycemic coma
253.0-253.8	Disorders of the pituitary gland and its hypothalamic control
253.9	Unspecified disorder of the pituitary gland and its hypothalamic control
255.0	Cushing's syndrome
291.0-291.2	Alcohol-induced mental disorders
299.00-299.01	Autistic disorder
310.0-310.9	Specific non-psychotic mental disorders due to brain damage
320.0-320.89	Bacterial meningitis
320.9	Meningitis due to unspecified bacterium
321.0-321.8	Meningitis due to other organisms
322.0-322.2	Meningitis of unspecified cause
322.9	Meningitis, unspecified
323.1	Encephalitis, myelitis, and encephalomyelitis in reckettsial diseases, classified elsewhere
323.2	Encephalitis, myelitis, and encephalomyelitis in protozoal diseases, classified elsewhere
323.81-323.82	Other causes of encephalitis, myelitis, and encephalomyelitis
323.9	Unspecified cause of encephalitis
324.0-324.1	Intracranial and intraspinal abscess
324.9	Intracranial and intraspinal abscess of unspecified site
325	Phlebitis and thrombophlebitis of intracranial venous sinuses
326	Late effects of intracranial abscess or pyogenic infection
330.0-330.8	Cerebral degenerations usually manifest in childhood
330.9	Unspecified cerebral degeneration in childhood
331.0-331.89	Other cerebral degenerations
332.0-332.1	Parkinson's disease
333.0-333.6	Other extrapyramidal disease and abnormal movement disorders
333.8-333.89	Fragments of torsion dystonia
333.90-333.99	Other and unspecified extrapyramidal diseases and abnormal movement disorders
334.0-334.8	Spinocerebellar disease
334.9	Spinocerebellar disease, unspecified
335.0-335.19	Spinal muscle atrophy

335.20-335.29	Motor neuron disease
336.0-336.9	Other diseases of the spinal cord
337.00	Idiopathic peripheral autonomic neuropathy, unspecified
337.01	Carotid sinus syndrome
337.09	Other idiopathic peripheral autonomic neuropathy, unspecified
337.1-337.3	Disorders of the autonomic nervous system
337.9	Unspecified disorder of autonomic nervous system
340	Multiple sclerosis
341.0-341.9	Other demyelinating diseases of central nervous system
342.00-342.82	Hemiplegia and hemiparesis
342.90-342.92	Hemiplegia, unspecified
343.0-343.8	Infantile cerebral palsy
343.9	Infantile cerebral palsy-unspecified
344.00-344.09	Quadriplegia and quadriplegia
344.1-344.2	Paraplegia and diplegia of upper limbs
344.30-344.32	Monoplegia of lower limb
344.40-344.42	Monoplegia of upper limb
344.81-344.89	Other specified paralytic syndromes
344.9	Paralysis, unspecified
345.00-345.81	Epilepsy
345.90-345.91	Epilepsy, unspecified
347.00-347.01	Narcolepsy with and without cataplexy
347.10-347.11	Narcolepsy in conditions classified elsewhere
349.2	Disorders of meninges, not elsewhere classified
349.81-349.82	Other specified disorders of nervous system
350.1-350.9	Trigeminal nerve disorders
351.0	Bell's palsy
351.1	Geniculate ganglionitis
351.8	Other facial nerve disorders
351.9	Facial nerve disorder, unspecified
352.0-352.9	Disorders of other cranial nerves
357.5	Alcoholic polyneuropathy
358.00	Myasthenia gravis without (acute) exacerbation
358.01	Myasthenia gravis with (acute) exacerbation
358.1	Myasthenic syndromes in diseases classified elsewhere
362.34	Transient retinal arterial occlusion
368.11	Sudden visual loss
368.12	Transient visual loss
368.16	Psychophysical visual disturbances
368.2	Diplopia
368.30-368.34	Other disorders of binocular vision
368.40	Visual field defect, unspecified
368.41-368.43	Visual field defects
368.42	Scotoma of blind spot area
368.44	Other localized visual field defect
368.45	Generalized visual field contraction or constriction
368.46	Homonymous bilateral field defects
368.47	Heteronymous bilateral field defects
368.53-368.59	Color vision deficiencies
376.01	Orbital cellulitis
376.35	Pulsating exophthalmus
377.00-377.01	Papilledema
377.04	Foster-Kennedy syndrome
377.11	Primary optic atrophy
377.15	Partial optic atrophy
377.23	Coloboma of optic disc

377.30-377.32	Optic neuritis
377.33-377.39	Nutritional optic neuropathy; toxic optic neuropathy; other optic neuritis
377.41-377.49	Other disorders of optic nerve
377.51	Disorder of optic chiasm, associated with pituitary neoplasms and disorders
377.52	Disorder of optic chiasm, associated with other neoplasms
377.53	Disorder of optic chiasm, associated with vascular disorders
377.54	Disorder of optic chiasm, associated with inflammatory disorders
377.61	Disorders of other visual pathways associated with neoplasms
377.62	Disorders of other visual pathways associated with vascular disorders
377.63	Disorders of other visual pathways associated with inflammatory disorders
377.71-377.72	Disorders of visual cortex
377.73	Disorders of visual cortex associated with inflammatory disorders
377.75	Cortical blindness
377.9	Unspecified disorder of optic nerve and visual pathways
378.50-378.56	Paralytic strabismus
378.71-378.73	Other specified strabismus
378.81	Palsy of conjugate gaze
378.82-378.85	Other disorders of binocular eye movements
378.86	Internuclear ophthalmoplegia
378.87	Other dissociated deviation of eye movements
379.50-379.58	Nystagmus and other irregular eye movements
379.59	Other irregularities of eye movements
379.92	Swelling or mass of eye
380.14	Malignant otitis externa
386.00-386.03	Meniere's disease
386.2	Vertigo of central origin
386.30-386.9	Labyrinthitis and other specified and unspecified vertiginous syndromes and labyrinthine disorders
388.5	Disorders of acoustic nerve
388.61	Cerebrospinal fluid otorrhea
389.10-389.11	Sensorineural hearing loss
389.12	Neural hearing loss
389.14	Central hearing loss
401.0	Malignant essential hypertension
427.31-427.32	Atrial fibrillation and flutter
430	Subarachnoid hemorrhage
431	Intracerebral hemorrhage
432.0-432.9	Other and unspecified intracranial hemorrhage
433.00-433.81	Occlusion and stenosis of precerebral arteries
433.90-433.91	Occlusion and stenosis of unspecified precerebral artery; with cerebral infarction
434.00-434.91	Occlusion of cerebral arteries
435.0-435.9	Transient cerebral ischemia
436	Acute, but ill-defined, cerebrovascular disease
437.0-437.8	Other and ill-defined cerebrovascular disease
438.0-438.9	Late effects of cerebrovascular disease
438.13	Late effects of cerebrovascular disease, dysarthria
438.14	Late effects of cerebrovascular disease, fluency disorder
444.89	Embolism and thrombosis of other artery
446.0	Polyarteritis nodosa
446.5-446.7	Giant cell arteritis; Thrombotic microangiopathy; Takayasu's disease
447.8	Other specified disorders of arteries and arterioles
448.0	Hereditary hemorrhagic telangiectasia
453.0-453.4	Other venous embolism and thrombosis
453.81	Acute venous embolism and thrombosis of superficial veins of upper extremity
453.82	Acute venous embolism and thrombosis of deep veins of upper extremity
453.83	Acute venous embolism and thrombosis of upper extremity, unspecified

453.84	Acute venous embolism and thrombosis of axillary veins
453.85	Acute venous embolism and thrombosis of subclavian veins
453.86	Acute venous embolism and thrombosis of internal jugular veins
453.87	Acute venous embolism and thrombosis of other thoracic veins
453.89	Acute venous embolism and thrombosis of other specified veins
572.2	Hepatic coma
642.50-642.54	Severe preeclampsia
642.60-642.64	Eclampsia
668.20-668.24	Central nervous system complications of anesthesia or other sedation in labor and delivery
710.0	Systemic lupus erythematosus
740.0-740.1	Anencephalus and similar anomalies
741.00-741.93	Spina bifida
742.0-742.9	Other congenital anomalies of nervous system
747.81	Congenital anomalies of cerebrovascular system
754.0	Congenital musculoskeletal deformities of skull, face, and jaw
756.0	Congenital anomalies of skull and face bones
759.5-759.6	Tuberous sclerosis; other hamartoses, not elsewhere classified
759.81-759.89	Other specified congenital anomalies
767.0	Subdural and cerebral hemorrhage due to birth trauma
767.11	Epicranial subaponeurotic hemorrhage (massive)
767.3	Other injuries to skeleton due to birth trauma
771.1-771.2	Congenital cytomegalovirus infection, other than congenital infections
772.10-772.14	Intraventricular hemorrhage
780.01	Coma
780.02-780.03	Transient alteration of awareness; persistent vegetative state
780.31	Febrile convulsions
780.51	Insomnia with sleep apnea
781.0	Abnormal involuntary movements
781.1-781.4	Disturbances of sensation of smell and taste; abnormality of gait; lack of coordination; transient paralysis of limb
781.6	Meningismus
781.8	Neurologic neglect syndrome
781.94	Facial weakness
784.3	Aphasia
784.49	Other voice disturbance
784.51	Dysarthria
784.59	Other speech disturbance
784.60-784.69	Other symbolic dysfunction
785.50-785.51	Shock without mention of trauma, unspecified; cardiogenic shock
794.00-794.02	Nonspecific abnormal results of function studies-brain and central nervous system
794.09	Other nonspecific abnormal results of function study of brain and central nervous system
794.10-794.19	Peripheral nervous system and special senses
800.00-800.99	Fracture of vault of skull
801.00-801.99	Fracture of base of skull
802.0-802.9	Fracture of face bones
803.00-803.99	Other and unqualified skull fractures
804.00-804.99	Multiple fractures involving skull or face with other bones
850.0-850.9	Concussion
851.00-851.99	Cerebral laceration and contusion
852.00-852.59	Subarachnoid, subdural and extradural hemorrhage, following injury
853.00-853.19	Other and unspecified intracranial hemorrhage following injury
854.00-854.19	Intracranial injury of other unspecified nature
870.3-870.4	Penetrating wound of orbit, with and without mention of foreign body
871.3	Avulsion of eye

900.00-900.9	Injury to blood vessels of head and neck
905.0	Late effect of fracture of skull and face bones
906.0	Late effect of open wound of head, neck, and trunk
907.0	Late effect of intracranial injury without skull fracture
908.3	Late effect of injury to blood vessel of head, neck, and extremities
925.1-925.2	Crushing injury of face, scalp, and neck
950.0	Optic nerve injury
950.1	Injury to optic chiasm
950.2	Injury to optic pathways
950.3-950.9	Injury to optic nerve and pathways
951.0-951.9	Injury to other cranial nerves
967.0-967.9	Poisoning by sedatives and hypnotics
968.0-968.5	Poisoning by other central nervous system depressants and anesthetics
969.00	Poisoning by antidepressant, unspecified
969.01	Poisoning by monoamine oxidase inhibitors
969.02	Poisoning by selective serotonin and norepinephrine reuptake inhibitors
969.03	Poisoning by selective serotonin reuptake inhibitors
969.04	Poisoning by tetracyclic antidepressants
969.05	Poisoning by tricyclic antidepressants
969.09	Poisoning by other antidepressants
969.70	Poisoning by psychostimulant, unspecified
969.71	Poisoning by caffeine
969.72	Poisoning by amphetamines
969.73	Poisoning by methylphenidate
769.79	Poisoning by other psychostimulants
986	Toxic effect of carbon monoxide
987.0-987.8	Toxic effect of other gases, fumes, or vapors
989.5	Toxic effect of venom
996.2	Mechanical complication of nervous system device, implant, and graft
996.63	Infection and inflammatory reaction due to nervous system device, implant, and graft
996.75	Other complications due to nervous system device, implant and, graft
997.00-997.09	Nervous system complications
V10.00-V10.84	Personal history of malignant neoplasm
V10.85	Personal history of malignant neoplasm of brain
V10.86-V10.89	Personal history of malignant neoplasm of other sites
V12.41	Personal history of benign neoplasm of brain

Contraindications:

1. Patients with cardiac pacemakers or metallic clips on vascular aneurysms or other metallic implants.
2. Patients requiring life support systems and monitoring devices which employ Ferro magnetic materials (metal that could be magnetized).
3. Patients who have claustrophobia.
4. Patients who have ferrous ocular foreign bodies, imbedded shrapnel fragments or cochlear implants.

Coding Guidelines:

Diagnosis codes other than those listed above will require review for medical necessity and prior authorization.

Documentation Requirements

The ordering physician is responsible for certifying the medical necessity of the procedure. The physician must have documentation in the medical record to support the referral.

Documentation in the progress notes must reflect medical necessity for the MRI.

Medical records can be used in any post-payment review and must include the information necessary to substantiate the need for the procedure.

In order for an MRI to be covered for a diagnosis of headache, the headache must have features suggestive of increased intracranial pressure, such as headaches which awaken patients from sleep, are made worse by coughing or straining, or headaches which are becoming progressively more severe, or headaches which are associated with other neurological findings such as nuchal rigidity or focal neurologic findings on examination. These findings must be documented in the patient's medical record.

Reference:

Medicare Medical Policy #T96032 effective 1/4/2001.

Revised 1/1/2008: Added 323.81-323.82

Revised 11/17/2008: Added 205.82, 205.92, 208.92, 337.00-.01, 337.09 (OHCA/QAQI)