Spine Soft Tissue Dysfunction Rehabilitation

ACG: A-0364 (AC)
Link to Codes

MCG Health
Ambulatory Care
30th Edition

This MCG care guideline may overlap CMS guidance located in CMS statutes and regulations that are not currently part of MCG's Medicare Compliance content. For Medicare Advantage beneficiaries, before referring to MCG care guidelines, users should first follow all guidance related to this topic located in CMS National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), and other statutes and regulations. Content used in MCG care guidelines may be used to supplement but does not replace, modify, or supersede existing Medicare regulations or applicable NCDs or LCDs.

Clinical Indications

- Spine soft tissue dysfunction rehabilitation may be indicated for **1 or more** of the following:
  - Initial therapy, when **ALL** of the following are present:
    - Spinal pain or disorder, as indicated by **1 or more** of the following:
      - Acute neck pain(4)(5)(6)(7)N
      - Acute or subacute low back pain[A](11)(12)(13)N
      - Acute or subacute thoracic pain(22)(23)(24)N
      - Adolescent idiopathic scoliosis(25)(26)(27)N
      - Cervical disk disease(30)(31)(32)N
      - Congenital muscular torticollis(34)(35)N
      - Exacerbation of chronic low back pain[A](37)(38)(39)N
      - Exacerbation of chronic neck pain(47)(48)(49)(50)N
      - Lumbar disk disease(51)(52)(53)N
      - Lumbar spinal stenosis(56)(57)(58)(59)N
      - Neck pain due to whiplash injury(5)(6)(63)N
      - Postoperative lumbar disk or lumbar fusion surgery(65)N
      - Sacroiliac dysfunction(66)(67)N
    - No evidence of fracture
    - No evidence of inconsistent signs and symptoms that may be associated with other serious pathologic conditions

        - No evidence of new or worsening neurologic symptoms
        - No evidence of rupture of repaired or injured tissue
        - Patient is expected to be able to adequately participate in and respond as planned to proposed treatment.
    - Extended therapy, when **ALL** of the following are present(68)(69)(70)(71):
        - Functional progress has been made during initial therapy, or patient requires maintenance therapy plan[B] to prevent further deterioration or preserve existing function.
        - Goals of therapy are not yet met.
        - Patient is actively participating in treatment sessions.
        - Patient is adherent to plan of care.

Treatment Plan

- Treatment plan includes:
    - Goals of therapy:
        - Decreased pain medication requirements and dependency(72)(73)
        - Decreased pain to allow patient to participate in activities of daily living
        - Decreased progression to chronic pain state or syndrome(16)(37)(74)
        - Earlier safe return to work(75)
        - Improvement in quality of life(76)
        - Increased functional independence with mobility-related tasks(38)
        - Increased strength and range of motion(77)
        - Increased understanding of self-management of disease, injury, or surgical procedure(78)(79)
        - Independence in performing home exercise program(76)
        - Independence with using durable medical equipment
    - Planned interventions:
        - Education(3)(4)(11)(38)(43):
            - Addressing risk factors that increase likelihood of transition to chronic pain(80):
                - Belief that avoidance of activity will help recovery (fear-avoidance belief)(37)(79)(81)(82)
                - Belief that pain is due to progressive pathology or that pain is harmful or severely disabling(37)(83)
                - Depressed or negative moods (eg, social withdrawal, anger, depression)(84)
                - Maladaptive pain behaviors
                - Medication use(16)(72)
                - Negative beliefs related to work status (eg, no promotion or progress at low-level job, significant payment while injured, low job satisfaction)
                - Negative expectations about recovery(84)
                - Unrelenting expectation that passive treatments rather than active self-management will help
            - Body mechanics and energy conservation techniques(16)
            - Control of inflammation and edema
            - Disease process(34)
            - Home exercises(30)(34)(35)(85)
            - Self-management of disease/activity modification(37)
            - Work and home environment modifications as they relate to dysfunction or surgery(86)
        - Therapeutic modalities:
            - During acute phase:
                - Cryotherapy(16)(32)(77)(87)
                - Functional mobility training
                - Manual therapy (eg, soft tissue, neural, or joint mobilization; trigger point therapy; dry needling) for(5)(11):
                    - Congenital muscular torticollis(34)(35)(85)
                    - Low back pain(3)(4)(11)(19)
                    - Neck pain(5)(6)(88)
                - Therapeutic exercise for strengthening, range of motion, flexibility, or endurance(4)(11)(19)(34)(35)(37)(85)(89)
            - During restorative phase:

- Cognitive behavioral therapy(4)(90)(91)
  - Biofeedback(92)
  - Relaxation
- Developmentally appropriate activities for congenital muscular torticollis(34)(35)(85)
- Manual therapy (eg, soft tissue, neural, or joint mobilization; trigger point therapy; dry needling) for(5)(11):
  - Congenital muscular torticollis(34)(35)(85)
  - Low back pain(1)(4)(93)
  - Neck pain(1)(6)
  - Sacroiliac dysfunction(66)
- Therapeutic exercise for strengthening, range of motion, flexibility, or endurance for(4)(89):
  - Acute or subacute thoracic pain
  - Adolescent idiopathic scoliosis(25)
  - Cervical disk disease(32)
  - Congenital muscular torticollis(34)(35)(85)
  - Low back pain (with or without lumbosacral radiculopathy)(73)(82)
  - Lumbar disk disease(51)
  - Lumbar spinal stenosis(58)(60)
  - Neck pain(6)(50)(76)
  - Neck pain due to whiplash injury(6)(94)
  - Postoperative lumbar disk surgery
  - Sacroiliac dysfunction(66)(67)
- Thermal modalities(87)

- For chronic cervical or lumbar spine pain that has not responded to treatment, see Pain Rehabilitation AC for more information.

Visits per Episode

ICD-10-CM Code	Diagnosis Description	One Visit Episode %	Mean *	25th %ile *	50th %ile (Median) *	75th %ile *	Episode > 1 Year % *
G54.1	Lumbosacral plexus disorders	31.76%	9.7	3	5	13	4.95%
G54.2	Cervical root disorders, not elsewhere classified	19.89%	10.2	3	6	12	5.37%
G54.3	Thoracic root disorders, not elsewhere classified	14.91%	10.5	4	8	14	3.65%
G54.4	Lumbosacral root disorders, not elsewhere classified	37.5%	6.7	2	4	9	5.33%
G57.00	Lesion of sciatic nerve, unspecified lower limb	16.46%	7.0	2	5	10	0%
G57.01	Lesion of sciatic nerve, right lower limb	16.1%	8.3	3	6	11	1.52%
G57.02	Lesion of sciatic nerve, left lower limb	14.48%	9.0	3	6	11	3.76%

M40.03	Postural kyphosis, cervicothoracic region	25.24%	8.6	3	5	11	1.73%
M40.04	Postural kyphosis, thoracic region	22.53%	9.3	4	7	11	0.51%
M40.202	Unspecified kyphosis, cervical region	16.67%	11.1	4	7	12	3.08%
M40.292	Other kyphosis, cervical region	26.29%	8.1	3	5	10	1.17%
M41.114	Juvenile idiopathic scoliosis, thoracic region	14.29%	8.8	3	7	12	5.13%
M41.115	Juvenile idiopathic scoliosis, thoracolumbar region	19.72%	9.3	4	7	12	6.14%
M41.124	Adolescent idiopathic scoliosis, thoracic region	18.58%	9.2	4	7	11	2.91%
M41.125	Adolescent idiopathic scoliosis, thoracolumbar region	15.97%	9.2	3	7	12	2.49%
M41.126	Adolescent idiopathic scoliosis, lumbar region	19.23%	10.0	4	7	13	3.17%
M41.129	Adolescent idiopathic scoliosis, site unspecified	13.27%	8.7	4	7	11	1.02%
M41.20	Other idiopathic scoliosis, site unspecified	16.18%	9.3	4	7	12	1.17%
M41.24	Other idiopathic scoliosis, thoracic region	20.5%	10.1	3	7	13	3.91%
M41.25	Other idiopathic scoliosis, thoracolumbar region	16.11%	9.6	4	7	12	4%
M41.26	Other idiopathic scoliosis, lumbar region	20.62%	9.3	4	7	11	2.45%
M41.34	Thoracogenic scoliosis, thoracic region	15.79%	9.8	4	7	11	3.75%
M41.86	Other forms of scoliosis, lumbar region	14.41%	8.2	4	6	9	0%

M41.9	Scoliosis, unspecified	16.97%	9.9	4	7	12	3.73%
M43.00	Spondylolysis, site unspecified	9.41%	11.2	5	10	15	0%
M43.02	Spondylolysis, cervical region	24.82%	10.1	3	6	12	3.3%
M43.03	Spondylolysis, cervicothoracic region	35.11%	6.0	3	4	6	3.28%
M43.06	Spondylolysis, lumbar region	11.75%	10.2	4	8	14	1.23%
M43.07	Spondylolysis, lumbosacral region	22.49%	9.5	3	6	12	4.58%
M43.10	Spondylolisthesis, site unspecified	12.67%	10.7	3	8	12	2.07%
M43.12	Spondylolisthesis, cervical region	19.13%	8.6	4	6	11	2.15%
M43.16	Spondylolisthesis, lumbar region	14.06%	11.0	4	8	14	1.36%
M43.17	Spondylolisthesis, lumbosacral region	13.94%	9.0	4	6	11	2.06%
M43.22	Fusion of spine, cervical region	4.23%	14.6	6	11	19	2.58%
M43.26	Fusion of spine, lumbar region	5.08%	14.6	6	11	19	1.47%
M43.27	Fusion of spine, lumbosacral region	8.42%	14.4	7	10	20	3.45%
M43.6	Torticollis	21.29%	8.8	3	6	11	3.05%
M46.02	Spinal enthesopathy, cervical region	29.63%	8.9	3	5	11	6.14%
M46.03	Spinal enthesopathy, cervicothoracic region	24.23%	6.4	3	4	7	3.15%
M46.04	Spinal enthesopathy, thoracic region	36.17%	7.6	2	5	9	5.56%

M46.06	Spinal enthesopathy, lumbar region	27.54%	7.9	3	5	10	5.48%
M46.07	Spinal enthesopathy, lumbosacral region	24.6%	7.2	3	4	9	4.28%
M46.1	Sacroiliitis, not elsewhere classified	19.04%	9.3	3	6	12	2.41%
M46.46	Discitis, unspecified, lumbar region	21.52%	9.4	4	6	11	1.61%
M46.92	Unspecified inflammatory spondylopathy, cervical region	14.61%	8.4	3	6	12	3.95%
M46.96	Unspecified inflammatory spondylopathy, lumbar region	19.02%	7.9	4	6	10	1.34%
M47.12	Other spondylosis with myelopathy, cervical region	19.16%	11.4	5	9	15	2.22%
M47.16	Other spondylosis with myelopathy, lumbar region	8.24%	11.6	4	8	14	1.92%
M47.22	Other spondylosis with radiculopathy, cervical region	14.8%	9.8	4	7	12	1.41%
M47.23	Other spondylosis with radiculopathy, cervicothoracic region	15.73%	10.0	4	8	16	4%
M47.26	Other spondylosis with radiculopathy, lumbar region	12.94%	10.4	4	8	13	2.59%
M47.27	Other spondylosis with radiculopathy, lumbosacral region	12.83%	10.2	4	7	12	1.21%
M47.812	Spondylosis without myelopathy or radiculopathy, cervical region	16.88%	9.3	4	6	12	2.28%
M47.813	Spondylosis without myelopathy or	27.55%	8.2	3	6	9	5.63%

	radiculopathy, cervicothoracic region						
M47.814	Spondylosis without myelopathy or radiculopathy, thoracic region	23.53%	8.7	3	5	10	3.85%
M47.816	Spondylosis without myelopathy or radiculopathy, lumbar region	17%	8.9	3	6	11	1.35%
M47.817	Spondylosis without myelopathy or radiculopathy, lumbosacral region	17.93%	8.9	3	6	11	2.84%
M47.892	Other spondylosis, cervical region	15.54%	9.9	4	7	12	2.23%
M47.894	Other spondylosis, thoracic region	18.95%	8.6	3	6	12	1.3%
M47.896	Other spondylosis, lumbar region	17.25%	9.2	4	7	12	0.8%
M47.897	Other spondylosis, lumbosacral region	14.46%	8.7	3	7	12	0%
M47.9	Spondylosis, unspecified	11.04%	10.1	3	6	12	0.73%
M48.00	Spinal stenosis, site unspecified	12.7%	11.8	5	9	16	2.73%
M48.02	Spinal stenosis, cervical region	17.27%	10.4	4	8	13	1.91%
M48.05	Spinal stenosis, thoracolumbar region	14.67%	10.0	5	8	12	0%
M48.061	Spinal stenosis, lumbar region without neurogenic claudication	14.16%	10.6	4	8	13	1.84%
M48.062	Spinal stenosis, lumbar region with neurogenic claudication	15.92%	11.1	4	8	14	1.23%

M48.07	Spinal stenosis, lumbosacral region	11.83%	11.6	5	10	15	1.32%
M50.00	Cervical disc disorder with myelopathy, unspecified cervical region	15.7%	10.1	3	8	12	2.76%
M50.022	Cervical disc disorder at C5-C6 level with myelopathy	26.27%	9.4	3	6	11	0%
M50.10	Cervical disc disorder with radiculopathy, unspecified cervical region	14.04%	10.3	4	7	12	1.35%
M50.11	Cervical disc disorder with radiculopathy, high cervical region	19.75%	8.4	3	7	11	3.08%
M50.120	Mid-cervical disc disorder, unspecified level	16.97%	11.2	4	8	15	4.38%
M50.121	Cervical disc disorder at C4-C5 level with radiculopathy	19.2%	10.5	4	7	13	1.92%
M50.122	Cervical disc disorder at C5-C6 level with radiculopathy	18.68%	10.4	4	8	13	2.78%
M50.123	Cervical disc disorder at C6-C7 level with radiculopathy	19.35%	9.5	4	7	12	2.97%
M50.13	Cervical disc disorder with radiculopathy, cervicothoracic region	13.3%	10.1	4	7	13	1.98%
M50.20	Other cervical disc displacement, unspecified cervical region	18.77%	9.5	4	7	12	2.26%
M50.21	Other cervical disc displacement, high cervical region	31.73%	9.2	3	6	11	8.45%
M50.220	Other cervical disc displacement, mid-cervical region, unspecified level	11.11%	10.8	4	8	15	5.21%

M50.221	Other cervical disc displacement at C4-C5 level	27.46%	9.6	3	7	13	2.91%
M50.222	Other cervical disc displacement at C5-C6 level	23.05%	10.4	4	7	13	5.53%
M50.223	Other cervical disc displacement at C6-C7 level	27.39%	7.3	3	5	10	0.88%
M50.23	Other cervical disc displacement, cervicothoracic region	24.29%	9.7	3	7	13	4.72%
M50.30	Other cervical disc degeneration, unspecified cervical region	15.49%	9.4	4	7	12	1.43%
M50.31	Other cervical disc degeneration, high cervical region	18.49%	11.5	5	9	14	3.09%
M50.320	Other cervical disc degeneration, mid-cervical region, unspecified level	20.35%	10.0	3	7	13	5%
M50.321	Other cervical disc degeneration at C4-C5 level	19.5%	11.4	4	8	15	5.73%
M50.322	Other cervical disc degeneration at C5-C6 level	22.18%	10.2	3	7	13	5.34%
M50.323	Other cervical disc degeneration at C6-C7 level	23.05%	10.3	3	7	13	4.06%
M50.33	Other cervical disc degeneration, cervicothoracic region	19.01%	9.1	3	6	12	3.06%
M50.80	Other cervical disc disorders, unspecified cervical region	23.81%	9.5	4	6	13	2.78%

M50.90	Cervical disc disorder, unspecified, unspecified cervical region	12.12%	9.4	4	6	12	1.92%
M51.06	Intervertebral disc disorders with myelopathy, lumbar region	14.43%	9.8	4	7	13	1.48%
M51.16	Intervertebral disc disorders with radiculopathy, lumbar region	15.31%	10.6	4	8	14	1.89%
M51.17	Intervertebral disc disorders with radiculopathy, lumbosacral region	15.08%	11.8	4	9	15	2.35%
M51.24	Other intervertebral disc displacement, thoracic region	27.93%	9.1	3	6	12	3.13%
M51.26	Other intervertebral disc displacement, lumbar region	17.36%	9.6	4	7	12	2.26%
M51.27	Other intervertebral disc displacement, lumbosacral region	20.34%	9.5	3	7	13	4.16%
M51.34	Other intervertebral disc degeneration, thoracic region	20%	11.0	4	7	14	3.93%
M51.35	Other intervertebral disc degeneration, thoracolumbar region	10.14%	9.3	3	6	11	6.45%
M51.86	Other intervertebral disc disorders, lumbar region	18.08%	9.2	3	6	12	3.27%
M51.87	Other intervertebral disc disorders, lumbosacral region	24.19%	10.0	3	6	16	6.38%
M51.9	Unspecified thoracic, thoracolumbar and lumbosacral intervertebral disc disorder	15.96%	9.5	4	7	12	3.56%
M53.0	Cervicocranial syndrome	26.35%	8.7	3	6	11	4.1%

M53.1	Cervicobrachial syndrome	30.23%	7.2	3	4	9	4.55%
M53.2X6	Spinal instabilities, lumbar region	15.73%	10.5	4	8	13	2.07%
M53.2X7	Spinal instabilities, lumbosacral region	21.65%	9.3	3	6	11	4.97%
M53.2X8	Spinal instabilities, sacral and sacrococcygeal region	19.14%	7.9	3	6	10	2.02%
M53.3	Sacrococcygeal disorders, not elsewhere classified	16.16%	8.6	3	6	11	2.24%
M53.82	Other specified dorsopathies, cervical region	30.9%	6.9	3	4	9	4.32%
M53.83	Other specified dorsopathies, cervicothoracic region	30.12%	7.3	3	5	9	5.05%
M53.84	Other specified dorsopathies, thoracic region	35.6%	6.5	3	4	8	3.75%
M53.85	Other specified dorsopathies, thoracolumbar region	24.44%	8.1	3	4	9	5.88%
M53.86	Other specified dorsopathies, lumbar region	28.79%	6.8	2	4	9	2.36%
M53.87	Other specified dorsopathies, lumbosacral region	27.47%	8.1	3	5	9	4.24%
M53.88	Other specified dorsopathies, sacral and sacrococcygeal region	18.89%	8.4	3	5	11	4.11%
M53.9	Dorsopathy, unspecified	24.18%	9.6	3	6	12	4.35%
M54.02	Panniculitis affecting regions of neck and back, cervical region	38.7%	6.0	2	4	6	4.96%

M54.06	Panniculitis affecting regions of neck and back, lumbar region	35.25%	6.3	2	4	8	2.22%
M54.07	Panniculitis affecting regions of neck and back, lumbosacral region	29.92%	7.4	2	5	9	6.74%
M54.08	Panniculitis affecting regions of neck and back, sacral and sacrococcygeal region	37.98%	8.4	3	5	11	8.75%
M54.11	Radiculopathy, occipito-atlanto-axial region	20.75%	7.8	3	4	9	1.19%
M54.12	Radiculopathy, cervical region	15%	9.5	4	7	12	1.78%
M54.14	Radiculopathy, thoracic region	27.34%	8.0	3	5	10	3.02%
M54.15	Radiculopathy, thoracolumbar region	25.05%	8.6	3	6	11	3.52%
M54.16	Radiculopathy, lumbar region	13.91%	10.0	4	7	13	1.68%
M54.17	Radiculopathy, lumbosacral region	19.1%	9.7	3	7	12	3.1%
M54.2	Cervicalgia	18.64%	9.4	3	7	12	4.13%
M54.30	Sciatica, unspecified side	20.3%	8.3	3	6	10	2.09%
M54.31	Sciatica, right side	15.19%	9.2	4	7	12	1.23%
M54.32	Sciatica, left side	14.46%	9.3	4	7	12	1.71%
M54.40	Lumbago with sciatica, unspecified side	18.13%	9.2	3	6	12	2.36%
M54.41	Lumbago with sciatica, right side	17.4%	8.9	3	6	11	1.96%
M54.42	Lumbago with sciatica, left side	16.25%	8.9	3	6	11	1.61%

M54.81	Occipital neuralgia	15.25%	9.8	4	7	12	1.52%
M62.830	Muscle spasm of back	29.73%	7.4	3	5	9	6.75%
M96.1	Postlaminectomy syndrome, not elsewhere classified	14.59%	12.1	4	8	15	2.24%
M99.01	Segmental and somatic dysfunction of cervical region	35.46%	7.1	2	4	9	7.7%
M99.02	Segmental and somatic dysfunction of thoracic region	37.54%	6.5	2	4	8	6.47%
M99.03	Segmental and somatic dysfunction of lumbar region	33.5%	7.2	3	4	9	6.31%
M99.04	Segmental and somatic dysfunction of sacral region	33.46%	7.1	3	4	9	6.89%
M99.11	Subluxation complex (vertebral) of cervical region	34.77%	6.6	2	4	8	6.78%
M99.12	Subluxation complex (vertebral) of thoracic region	35.15%	7.8	2	4	10	12.24%
M99.13	Subluxation complex (vertebral) of lumbar region	35.79%	6.5	2	4	8	7.48%
M99.14	Subluxation complex (vertebral) of sacral region	40.32%	7.2	2	5	10	9.46%
Q68.0	Congenital deformity of sternocleidomastoid muscle	17.31%	9.1	3	6	12	5.05%
S13.100A	Subluxation of unspecified cervical vertebrae, initial encounter	36.9%	7.2	2	4	10	12.5%
S13.120A	Subluxation of C1/C2 cervical vertebrae, initial encounter	40.22%	7.3	2	4	9	12.27%

S13.121A	Dislocation of C1/C2 cervical vertebrae, initial encounter	25.95%	10.7	4	6	14	11.97%
S13.130A	Subluxation of C2/C3 cervical vertebrae, initial encounter	39.29%	6.1	2	4	8	13.73%
S13.160A	Subluxation of C5/C6 cervical vertebrae, initial encounter	30.3%	6.7	2	5	8	10.43%
S13.170A	Subluxation of C6/C7 cervical vertebrae, initial encounter	38.53%	5.7	2	4	7	7.46%
S13.4XXA	Sprain of ligaments of cervical spine, initial encounter	30.01%	8.4	3	5	11	7.03%
S13.4XXD	Sprain of ligaments of cervical spine, subsequent encounter	15.05%	10.6	4	7	13	2.28%
S13.8XXA	Sprain of joints and ligaments of other parts of neck, initial encounter	32.6%	6.7	2	4	8	5.98%
S13.9XXA	Sprain of joints and ligaments of unspecified parts of neck, initial encounter	22.69%	11.1	4	9	14	5.43%
S13.9XXD	Sprain of joints and ligaments of unspecified parts of neck, subsequent encounter	12.35%	10.3	4	7	12	0%
S16.1XXA	Strain of muscle, fascia and tendon at neck level, initial encounter	27.98%	7.5	3	5	9	6.55%
S16.1XXD	Strain of muscle, fascia and tendon at neck level, subsequent encounter	14.45%	10.1	4	7	13	2.48%
S23.3XXA	Sprain of ligaments of thoracic spine, initial encounter	35.04%	6.5	2	4	8	7.49%

S23.3XXD	Sprain of ligaments of thoracic spine, subsequent encounter	20.67%	9.1	4	7	12	3.36%
S29.012A	Strain of muscle and tendon of back wall of thorax, initial encounter	27.37%	6.2	2	4	7	5.52%
S29.012D	Strain of muscle and tendon of back wall of thorax, subsequent encounter	16.81%	8.8	4	6	11	0.52%
S33.100A	Subluxation of unspecified lumbar vertebra, initial encounter	31.71%	5.9	3	4	9	10.71%
S33.101A	Dislocation of unspecified lumbar vertebra, initial encounter	41.67%	6.8	2	4	7	6.59%
S33.130A	Subluxation of L3/L4 lumbar vertebra, initial encounter	48.57%	5.3	2	4	7	4.63%
S33.140A	Subluxation of L4/L5 lumbar vertebra, initial encounter	39.63%	6.4	2	4	8	8.94%
S33.2XXA	Dislocation of sacroiliac and sacrococcygeal joint, initial encounter	30.34%	6.4	3	4	8	8.06%
S33.5XXA	Sprain of ligaments of lumbar spine, initial encounter	30.42%	7.6	3	5	9	4.68%
S33.5XXD	Sprain of ligaments of lumbar spine, subsequent encounter	15.3%	9.0	4	7	12	1.79%
S33.6XXA	Sprain of sacroiliac joint, initial encounter	27.29%	7.6	3	5	9	3.7%
S33.6XXD	Sprain of sacroiliac joint, subsequent encounter	9.5%	9.6	4	8	12	2.39%
S33.8XXA	Sprain of other parts of lumbar spine and pelvis, initial encounter	31.54%	7.3	3	4	8	5.31%

S33.8XXD	Sprain of other parts of lumbar spine and pelvis, subsequent encounter	12.08%	9.2	4	7	12	2.84%
S39.012A	Strain of muscle, fascia and tendon of lower back, initial encounter	27.36%	7.2	3	5	9	3.57%
S39.012D	Strain of muscle, fascia and tendon of lower back, subsequent encounter	14.37%	9.0	4	6	11	1.78%
S39.012S	Strain of muscle, fascia and tendon of lower back, sequela	16.46%	8.3	3	6	10	4.55%

* Visit Summary for Episodes with 2 or more Visits

Evidence Summary

Background

Soft tissue dysfunction encompasses muscle sprains or strains and other posttraumatic, overuse, inflammatory, or poorly defined processes involving nonbony structures. For neck or low back pain with or without radicular symptoms, guidelines recommend physical therapy interventions such as manipulation, mobilization, and exercise to reduce pain and improve function.(1)(2)(3)(4) **(EG 2)**

Criteria

The evidence for the clinical indications found in this guideline includes 51 published peer reviewed articles, 5 specialty society or other evidence-based guidelines, 4 Cochrane systematic reviews, and 10 book sections.

For acute neck pain, evidence demonstrates at least moderate certainty of at least moderate net benefit. **(RG A1)** Mobilization and exercise therapy, especially strengthening, endurance, and coordination exercises, are recommended for neck pain.(4) **(EG 2)** A systematic review of 23 randomized controlled trials studied 4 different manual therapy treatment strategies for neck pain; in general, the authors concluded that combining different forms of manual therapy with exercise is better than either manual therapy or exercise alone, and that mobilization does not need to be applied at the symptomatic levels to achieve improvement in symptoms.(8) **(EG 1)** A systematic review that included 17 randomized controlled trials that studied neck pain found high-quality evidence that suggests greater short-term pain relief for acute neck pain with manual therapy combined with exercise as compared with exercise alone, but no long-term differences were found. However, the optimal exercises to combine with manual therapy remain unknown.(5) **(EG 1)** A multicenter randomized trial of 2971 patients with acute or subacute low back or neck pain compared treatment with either usual care, a multidisciplinary intervention (physical therapy, health coach counseling, and consultation with a pain specialist), or individualized postural therapy (physical therapy plus self-efficacy and self-management training) and found, at 3-month follow-up, statistically greater improvement in the multidisciplinary intervention and postural therapy groups from baseline in Oswestry Disability Index (ODI) scores compared with the usual care group.(9) **(EG 1)** A clinical practice guideline recommends neck range-of-motion exercises, scapulothoracic and upper extremity stretching and strengthening exercises, and manual therapy for acute neck pain with mobility deficits.(6) **(EG 2)**

For acute or subacute low back pain, evidence demonstrates at least moderate certainty of at least moderate net benefit. **(RG A1)** Bed rest should be avoided for acute back pain, and resumption of activities of daily living that had been ceased due to pain should be the focus of treatment.(12)(13)(14)(15)(16) **(EG 2)** A systematic review of exercise therapy vs sham therapy or placebo for acute nonspecific low back pain that included 23 randomized controlled trials (2674 patients) found, with very low certainty, that there was no clinically meaningful difference in pain or functional outcomes for exercise therapy compared with placebo or sham interventions. The authors noted that the evidence was low quality and at high risk for bias.(17) **(EG 1)** A multicenter randomized trial of 2971 patients with acute or subacute low back or neck pain compared treatment with either usual care, a multidisciplinary intervention (physical therapy, health coach counseling, and consultation with a pain specialist), or individualized postural therapy (physical therapy plus self-efficacy and self-management training) and found, at 3-month follow-up, statistically greater improvement in the multidisciplinary intervention and postural therapy groups from baseline in Oswestry Disability Index (ODI) scores compared with the usual care group.(9) **(EG 1)** A randomized controlled trial of 119 patients with low back pain lasting less than 90 days comparing early physical rehabilitation (rehabilitation starting immediately after

initial evaluation) with usual care demonstrated improvements in disability, as measured by the ODI, at the end of 4 weeks of treatment with rehabilitation. However, there were no between-group differences at 1 year.(18) **(EG 1)** A randomized clinical trial of 220 participants with low back pain of less than 16 days' duration found that the addition of early physical therapy (4 sessions over 3 weeks) to education was associated with statistically significant, but not clinically important, improvements in disability at 3 months.(19) **(EG 1)** A randomized trial of 220 patients with low back pain and sciatica of less than 90 days' duration found that the addition of early physical therapy (including exercise and manual therapy) to usual care and education was associated with greater improvement in ODI scores at 6-month follow-up.(20) **(EG 1)** A randomized controlled trial concluded that outpatient rehabilitation and progressive exercises decreased pain, disability, and pain-related fear in an occupational health setting.(21) **(EG 1)** An expert consensus guideline on the management of nonspecific low back pain lasting less than 12 weeks states that offering patients supervised exercise and spinal manual therapy, in addition to usual care, should be considered.(13) **(EG 2)** Exercise should be recommended to reduce the recurrence of low back pain; however, no specific exercise is preferred.(3)(4) **(EG 2)**

For acute or subacute thoracic pain, evidence demonstrates a net benefit, but of less than moderate certainty, and may consist of a consensus opinion of experts, case studies, and common standard care. **(RG A2)** Although most thoracic spine sprains or strains will heal spontaneously with rest and the use of ice, heating pad, or massage, physical therapy is indicated for pain that persists beyond a few weeks. Components of the physical therapy program include stretching and strengthening exercises. After the formal physical therapy program has concluded, maintenance home or gym exercises are recommended.(22) **(EG 2)** A systematic review identified one randomized controlled trial that evaluated different modalities for the treatment of recent-onset musculoskeletal thoracic pain and found that, as compared with placebo, spinal manipulation was associated with a small but clinically unimportant reduction in pain intensity.(23) **(EG 2)** A randomized placebo-controlled study of 80 patients with nonspecific acute or subacute thoracic pain evaluated the efficacy of spinal manipulative therapy and found, at 12-month follow-up, that there was no significant difference in pain intensity and disability scores between the groups.(24) **(EG 1)**

For adolescent idiopathic scoliosis, evidence demonstrates at least moderate certainty of at least moderate net benefit. **(RG A1)** A systematic review that included 20 studies showed that physical exercises can improve the Cobb angles, strength, mobility, and balance of adolescents with idiopathic scoliosis; however, it is not possible to support a particular exercise regimen.(25) **(EG 1)** A systematic review of 9 randomized controlled trials that compared scoliosis-specific exercises (ie, movements performed with the therapeutic aim of reducing the deformity) with other nonsurgical interventions for adolescent idiopathic scoliosis observed that scoliosis-specific exercises were associated with improvements in spine curvature as compared with control, based on 6 studies. Small sample sizes and significant heterogeneity precluded drawing conclusions about the impact on angle of rotation, pain, self-image, or quality of life.(28) **(EG 1)** A systematic review and meta-analysis of 9 studies (325 patients) comparing core-based exercise with other nonsurgical interventions in patients with scoliosis found that core-based exercise was associated with lower Cobb angles and improved quality of life (as measured by the Scoliosis Research Society-22 questionnaire) compared with other interventions; no difference in angle of trunk rotation was seen between groups.(29) **(EG 1)** An international specialty society guideline recommends physiotherapeutic scoliosis-specific exercises as initial treatment of idiopathic scoliosis progression during growth. Physiotherapeutic scoliosis-specific exercises are based on autocorrection of scoliosis, training in activities of daily living, stabilization of the corrected posture, and patient education.(27) **(EG 2)**

For cervical disk disease, evidence demonstrates at least moderate certainty of at least moderate net benefit. **(RG A1)** A prospective randomized controlled trial included 205 patients with symptoms and signs of cervical radiculopathy of a duration of less than 1 month and found that a semihard cervical collar and rest for 3 to 6 weeks, or physiotherapy twice a week accompanied by home exercises for 6 weeks, reduced neck and arm pain scores substantially, as compared with watchful waiting.(30) **(EG 1)** A prospective randomized study included 63 patients with radiculopathy (with mean duration of pain of 16 months and MRI-verified nerve root compression) and found that patients who received anterior cervical diskectomy and fusion followed by structured physiotherapy did not have additional improvements at 24 months in neck active range of motion, neck muscle endurance, or hand-related function, as compared with those who received structured physiotherapy alone. The authors suggested that structured physiotherapy should precede anterior cervical diskectomy and fusion in patients with radiculopathy.(31) **(EG 1)** A subsequent evaluation of 59 patients from this study found, at 5-year to 8-year follow-up, that surgery plus physiotherapy was associated with improvement in Neck Disability Index and pain scores compared with physiotherapy alone, although both groups showed significant improvement from baseline. The authors concluded that a trial of physiotherapy is appropriate for cervical radiculopathy prior to evaluation for surgery. The authors also noted that the study was limited by small sample size.(33) **(EG 1)**

For congenital muscular torticollis, evidence demonstrates a net benefit, but of less than moderate certainty, and may consist of a consensus opinion of experts, case studies, and common standard care. **(RG A2)** Infants with congenital muscular torticollis are treated with gentle passive stretching exercises, along with positioning and strengthening maneuvers to encourage active rotation to the involved side of the neck.(34) **(EG 2)** A systematic review and meta-analysis that evaluated the effectiveness of nonsurgical, nonpharmacologic interventions for congenital muscular torticollis included 100 studies (8125 patients) and found, after short-term follow-up (ie, less than 8 weeks), that patients who received manual therapy demonstrated improved passive and active range of motion and development of symmetric neck movement compared with those who received active control.(36) **(EG 1)** An expert consensus guideline on the management of congenital muscular torticollis emphasizes the importance of early referral of infants with suspected congenital muscular torticollis to physical therapy and recommends the following interventions for infants with congenital muscular torticollis: neck passive range-of-motion activities, neck and trunk active range-of-motion activities, development of symmetrical movement, environmental adaptations, and parent/caregiver education.(35) **(EG 2)** A review article on the management of congenital muscular torticollis recommends early referral to physical therapy to ensure the most effective positioning and stretching interventions and to support caregivers in providing home exercises correctly and appropriately.(34) **(EG 2)**

For an exacerbation of chronic low back pain, evidence demonstrates at least moderate certainty of at least moderate net benefit. **(RG A1)** A systematic review and meta-analysis evaluating exercise therapy for chronic low back pain reported pooled data (35 studies; 2746 patients) demonstrating that exercise was more effective for pain management compared with no treatment (ie, usual medical care or placebo). Pooled data from 64 studies (6295 patients) demonstrated that exercise therapy was more effective for pain and functional disability compared with other conservative treatments (eg, education, manual therapy, electrotherapy); however, these findings did not meet prespecified clinically important differences and were based on low-certainty to

moderate-certainty evidence.(39) **(EG 1)** A systematic review of 41 randomized controlled trials with 6858 chronic low back pain patients found that patients receiving multidisciplinary biopsychosocial rehabilitation (delivered by clinicians from at least 2 different professional backgrounds) were more likely to experience less pain and disability than those receiving usual care or a physical treatment, and were also more likely to work in the next 6 to 12 months than those receiving physical treatment.(40) **(EG 1)** A randomized controlled trial that included 346 people with chronic low back pain evaluated the effectiveness of guideline-directed therapy (eg, exercise, education), with or without additional nutritional consultation, educational resources, coaching, and cognitive behavioral therapy, and found, at 26 weeks of follow-up, that improvements in disability scores (as measured by the Roland-Morris Disability Questionnaire (RMDQ)) were statistically greater in patients in the arm that included the additional elements; however, after 52 weeks of follow-up, both treatments resulted in similar improvements in disability scores.(41) **(EG 1)** A modified randomized controlled trial that included 72 patients with chronic low back pain lasting at least 6 months found that resistance training of the lumbar muscles (either once or twice a week for 12 weeks) was associated with a significant reduction in pain scores as compared with no training.(42) **(EG 1)** A longitudinal study of 96 patients with chronic recurrent low back pain found that a 6-month multidisciplinary rehabilitation program consisting of resistance and sensorimotor training, patient education, and stress management was associated with significantly improved pain-free lumbar range of motion, lumbar muscle strength, pain, functional status, and health-related quality of life; improvements persisted at 18-month follow-up.(43) **(EG 2)** Many forms of exercise have been shown to be effective for low back pain, with no evidence that one form is superior to others.(38)(44)(45) **(EG 1)** A systematic review of 4 randomized controlled trials (364 participants) on conservative interventions for children and adolescents with low back pain concluded that there is moderate-quality evidence that supervised exercise programs have a large effect on reduction of average back pain intensity. However, large, high-quality, randomized controlled trials are needed to guide clinicians treating children and adolescents with low back pain.(46) **(EG 1)**

For an exacerbation of chronic neck pain, evidence demonstrates at least moderate certainty of at least moderate net benefit. **(RG A1)** A systematic review of 23 randomized controlled trials studied 4 different manual therapy treatment strategies for neck pain; in general, the authors concluded that combining different forms of manual therapy with exercise is better than either manual therapy or exercise alone, and that mobilization does not need to be applied at the symptomatic levels to achieve improvement in symptoms.(8) **(EG 1)** A systematic review and meta-analysis that included 7 studies supported the use of therapeutic exercise, which includes muscle strength training, stretching, and postural exercises, for chronic nonspecific neck pain, particularly for its effect on pain in both the short term (less than 1 month) and intermediate term (1 to 6 months).(47) **(EG 1)** A systematic review of 4 randomized controlled trials with 341 participants with chronic neck pain found moderate-quality evidence that combined stretching and strengthening was associated with moderate pain relief and improved function at long-term follow-up.(48) **(EG 1)** A systematic review that included 17 randomized controlled trials found moderate-quality evidence that manual therapy combined with exercise, as compared with manual therapy alone, is associated with pain reduction and improved quality of life in patients with chronic neck pain.(5) **(EG 1)** A randomized controlled trial of 170 patients with chronic neck pain comparing a multidisciplinary rehabilitation program (eg, multimodal exercises with cognitive behavioral therapy) and general physiotherapy found, at 1-year follow-up, that the multidisciplinary program was associated with reduced disability and pain severity and improved quality of life.(49) **(EG 1)**

For lumbar disk disease, evidence demonstrates at least moderate certainty of at least moderate net benefit. **(RG A1)** A randomized controlled trial of 40 patients with lumbar disk herniation and associated radiculopathy found that motor control training was more effective after 8 weeks as compared with transcutaneous electrical nerve stimulation in terms of relieving pain, reducing functional disability, and improving transversus abdominis activation; larger studies are needed to confirm these results.(54) **(EG 1)** A prospective single-arm trial of mechanical physiotherapy for lumbar disk prolapse included 50 consecutive patients and found, at 5-year follow-up, that mechanical physiotherapy with end-range spinal movements and leg movements is an effective treatment strategy for patients who experience pain centralization during the first 5 mechanical physiotherapy treatments.(51) **(EG 2)** Physical therapy, including extension-biased therapy, exercise, and core strengthening, may also be combined with education and manual therapy for the treatment of discogenic lower back pain.(52)(53) **(EG 2)** An evidence-based specialty society clinical practice guideline states that, although there is insufficient evidence to make a recommendation for or against physical therapy and structured exercise programs as stand-alone treatments for lumbar disk herniation with radiculopathy, consensus opinion does support a limited course of exercise for patients with mild to moderate symptoms. In addition, the guideline states that there is insufficient evidence to make a recommendation for or against spinal manipulation for patients with lumbar disk herniation with radiculopathy.(55) **(EG 2)** An expert consensus guideline on the management of lumbar radiculopathy lasting less than 12 weeks indicates that supervised exercise in addition to usual care should be considered. However, the guideline does not recommend one specific therapy technique.(13) **(EG 2)**

For lumbar spinal stenosis, evidence demonstrates at least moderate certainty of at least moderate net benefit. **(RG A1)** A systematic review of physical therapy interventions for degenerative lumbar spinal stenosis included 10 articles and found that surgery was more favorable than physical therapy in terms of leg pain and disability in the long term (2 years); however, as compared with no exercise, low-quality evidence suggests that exercise therapy leads to better short-term outcomes with respect to disability and back and leg pain, although the effect is small and clinically unclear.(56) **(EG 1)** A systematic review of the management of lumbar spinal stenosis included 13 studies and found that decompressive surgery is more effective than land-based exercise; however, given the condition's slowly progressive nature and the potential for surgical complications, a trial of land-based exercise, which produced overall small initial improvement in these patients, is recommended prior to consideration of surgical intervention.(57) **(EG 1)** A randomized 3-arm trial of 259 individuals age 60 years or older with symptomatic lumbar spinal stenosis compared manual therapy plus individualized exercise with group exercise classes or pharmacologic treatment, which included nonopioid pain management and epidural steroid injections. At 6-month follow-up, patients in all 3 groups demonstrated improvements in walking distance; no group was superior to the others in terms of walking distance, symptoms, or physical activity.(60) **(EG 1)** A randomized controlled trial of 169 surgical candidates with symptomatic lumbar spinal stenosis revealed no differences between those treated with either surgery or physical therapy with respect to symptom relief and functional improvement at 24-month follow-up.(58) **(EG 1)** A single-center randomized trial of 86 patients with lumbar spinal stenosis and neurogenic claudication compared treatment with a home exercise program with and without 6 weeks of supervised physical therapy sessions and found, at 1-year follow-up, that the addition of supervised physical therapy was associated with more patients achieving a minimum clinically important difference in Zurich claudication questionnaire symptom severity scores from baseline compared with no supervised physical therapy; supervised physical therapy was also associated with a lower surgery rate compared

with no supervised physical therapy.(61) **(EG 1)** A secondary analysis of a nationally representative cohort of 244 patients with spinal stenosis found that patients who received physical therapy within the first 6 weeks of enrollment had better patient self-ratings of improvement, greater improvement in physical functioning, and a reduced likelihood of surgery at 1-year follow-up.(59) **(EG 2)** An evidence-based specialty society clinical practice guideline states that, although there is insufficient evidence to make a recommendation for or against physical therapy and structured exercise programs as stand-alone treatments for degenerative lumbar spinal stenosis, consensus opinion does support a limited course of active physical therapy. In addition, the guideline states that there is insufficient evidence to make a recommendation for or against spinal manipulation for patients with lumbar spinal stenosis.(62) **(EG 2)**

For neck pain due to whiplash injury, evidence demonstrates at least moderate certainty of at least moderate net benefit. **(RG A1)** A systematic review that included 17 randomized controlled trials that studied neck pain found moderate-quality evidence that suggests greater short-term pain reduction with manual therapy combined with exercise as compared with traditional care for acute whiplash.(5) **(EG 1)** A systematic review of 14 randomized controlled trials evaluating treatment for neck pain (including whiplash injury) found that a multimodal program (including exercise, manual therapy, and education) improved functional recovery and self-rated disability.(64) **(EG 1)** A cluster randomized trial of over 2700 subjects with acute whiplash injury found that a package of up to 6 physiotherapy sessions, as compared with a single advice session, resulted in a modest benefit in pain reduction and return to work at 4 months, but not at 8 or 12 months.(63) **(EG 1)** A clinical practice guideline recommends education and a multimodal intervention approach (including exercise and manual mobilization) for patients expected to experience moderate to slow recovery with persistent impairments.(6) **(EG 2)**

For postoperative lumbar disk or lumbar fusion surgery, evidence demonstrates at least moderate certainty of at least moderate net benefit. **(RG A1)** A systematic review and meta-analysis of 18 randomized trials (1402 patients) evaluating the efficacy of rehabilitation for patients undergoing lumbar fusion surgery found, at up to 6 months postoperatively, low-certainty evidence that both exercise therapy and multimodal rehabilitation (exercise combined with cognitive behavioral therapy) were more effective for reducing disability (as measured by the Oswestry Disability Index (ODI) or Roland-Morris Disability Questionnaire (RMDQ)) and patient-reported pain compared with usual care, and low-certainty evidence that multimodal rehabilitation was more effective for reducing disability and pain-related fear compared with exercise therapy.(65) **(EG 1)**

For sacroiliac joint dysfunction, evidence demonstrates a net benefit, but of less than moderate certainty, and may consist of a consensus opinion of experts, case studies, and common standard care. **(RG A2)** Physical therapy recommendations for the treatment of sacroiliac joint dysfunction include strengthening the trunk and core while addressing tightness of the iliopsoas and weakness of the hip extensors or any imbalance of opposing muscle groups surrounding the sacroiliac joint.(66) **(EG 2)** Once failure of load transfer through the sacroiliac joint is diagnosed, a 3-stage progressive exercise therapy program is recommended, starting with isolation and recruitment of the targeted muscle group; then using those muscles in various combinations to develop endurance; and finally, progressing to functional activities.(67) **(EG 2)**

Rationale

Use of this MCG care guideline helps the clinician determine if a particular treatment, medication, or service might be appropriate for a specific patient, taking into account their unique health complexities.

Use of these evidence-based clinical criteria to support decision making benefits the patient by identifying patient-specific complex clinical factors and conditions, promoting personalized treatment. Utilizing evidence-based clinical criteria promotes patient safety by helping ensure that potential patient benefits outweigh the risks. In addition, the use of evidence-based guidelines can increase consistency in treatment thresholds, leading to less variation in care and promoting equitable treatment among patients.

Related CMS Coverage Guidance

This guideline supplements but does not replace, modify, or supersede existing Medicare regulations or applicable National Coverage Determinations (NCDs) or Local Coverage Determinations (LCDs).

Code of Federal Regulations (CFR): 42 CFR 419.22(95); 42 CFR 422.101(96)

Internet-Only Manual (IOM) Citations: CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 14 - Medical Devices(97); CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 15 - Covered Medical and Other Health Services(68); CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 16 - General Exclusions from Coverage(98)

Medicare Coverage Determinations: Medicare Coverage Database(99)

References

1. Atchison JW, Tolchin RB, Ross BS, Eubanks JE. Manipulation, traction, and massage. In: Cifu DX, et al., editors. Braddom's Physical Medicine and Rehabilitation. 6th ed. Philadelphia, PA: Elsevier; 2021:316-337.e7. [Context Link 1, 2, 3]

2. Depalma MJ, Ishigami S, Gasper JJ, Slipman CW. Common neck problems. In: Cifu DX, et al., editors. Braddom's Physical Medicine and Rehabilitation. 6th ed. Philadelphia, PA: Elsevier; 2021:627-650.e6. [Context Link 1]
3. Barr KP, Standaert CJ, Johnson SC, Sandhu NS. Low back disorders. In: Cifu DX, et al., editors. Braddom's Physical Medicine and Rehabilitation. 6th ed. Philadelphia, PA: Elsevier; 2021:651-689.e9. [Context Link 1, 2, 3, 4]
4. Valero R, et al. Spinal pain management. The role of physical and rehabilitation medicine physicians. The European perspective based on the best evidence. A paper by the UEMS-PRM Section Professional Practice Committee. European Journal of Physical and Rehabilitation Medicine 2013;49(5):715-25. [Context Link 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11] View abstract...
5. Miller J, et al. Manual therapy and exercise for neck pain: a systematic review. Manual Therapy 2010;15(4):334-54. [Context Link 1, 2, 3, 4, 5, 6, 7, 8] View abstract...
6. Blanpied PR, et al. Neck pain: revision 2017. Journal of Orthopaedic and Sports Physical Therapy 2017;47(7):A1-A83. DOI: 10.2519/jospt.2017.0302. (Reaffirmed 2025 Jul) [Context Link 1, 2, 3, 4, 5, 6, 7, 8] View abstract...
7. Xu A, Huang Q, Rong J, Wu X, Deng M, Ji L. Effectiveness of ischemic compression on myofascial trigger points in relieving neck pain: A systematic review and meta-analysis. Journal of Back and Musculoskeletal Rehabilitation 2023;36(4):783-798. DOI: 10.3233/BMR-220045. [Context Link 1] View abstract...
8. Hidalgo B, Hall T, Bossert J, Dugeny A, Cagnie B, Pitance L. The efficacy of manual therapy and exercise for treating non-specific neck pain: A systematic review. Journal of Back and Musculoskeletal Rehabilitation 2017;30(6):1149-1169. DOI: 10.3233/BMR-169615. [Context Link 1, 2] View abstract...
9. Choudhry NK, et al. Effect of a biopsychosocial intervention or postural therapy on disability and health care spending among patients with acute and subacute spine pain: the SPINE CARE randomized clinical trial. Journal of the American Medical Association 2022;328(23):2334-2344. DOI: 10.1001/jama.2022.22625. [Context Link 1, 2] View abstract...
10. Lumbar spine. In: Magee DJ, Manske RC, editors. Orthopedic Physical Assessment. 7th ed. St. Louis, MO: Elsevier; 2021:627-723 e6. [Context Link 1]
11. George SZ, et al. Interventions for the management of acute and chronic low back pain: revision 2021. Journal of Orthopaedic and Sports Physical Therapy 2021;51(11):CPG1-CPG60. DOI: 10.2519/jospt.2021.0304. [Context Link 1, 2, 3, 4, 5, 6] View abstract...
12. Oliveira CB, et al. Clinical practice guidelines for the management of non-specific low back pain in primary care: an updated overview. European Spine Journal 2018;27(11):2791-2803. DOI: 10.1007/s00586-018-5673-2. [Context Link 1, 2] View abstract...
13. Stochkendahl MJ, et al. National Clinical Guidelines for non-surgical treatment of patients with recent onset low back pain or lumbar radiculopathy. European Spine Journal 2018;27(1):60-75. DOI: 10.1007/s00586-017-5099-2. [Context Link 1, 2, 3, 4] View abstract...
14. Dahm KT, Brurberg KG, Jamtvedt G, Hagen KB. Advice to rest in bed versus advice to stay active for acute low-back pain and sciatica. Cochrane Database of Systematic Reviews 2010, Issue 6. Art. No.: CD007612. DOI: 10.1002/14651858.CD007612.pub2. [Context Link 1] View abstract...
15. Maher C, Underwood M, Buchbinder R. Non-specific low back pain. Lancet 2016;6736(16):30970-30979. DOI: 10.1016/S0140-6736(16)30970-9. [Context Link 1] View abstract...
16. El Abd OH, Amadera JE. Low back strain or sprain. In: Frontera WR, Silver JK, Rizzo TD Jr, editors. Essentials of Physical Medicine and Rehabilitation: Musculoskeletal Disorders, Pain, and Rehabilitation. 4th ed. Philadelphia, PA: Elsevier Saunders; 2019:264-268. [Context Link 1, 2, 3, 4, 5]
17. IJzelenberg W, et al. Exercise therapy for treatment of acute non-specific low back pain: a Cochrane systematic review and meta-analysis of randomized controlled trials. Archives of Physical Medicine and Rehabilitation 2024;105(8):1571-1584. DOI: 10.1016/j.apmr.2024.02.732. [Context Link 1] View abstract...
18. Rhon DI, Miller RB, Fritz JM. Effectiveness and downstream healthcare utilization for patients that received early physical therapy versus usual care for low back pain: a randomized clinical trial. Spine 2018;43(19):1313-1321. DOI: 10.1097/BRS.0000000000002619. [Context Link 1] View abstract...
19. Fritz JM, et al. Early physical therapy vs usual care in patients with recent-onset low back pain: a randomized clinical trial. Journal of the American Medical Association 2015;314(14):1459-1467. DOI: 10.1001/jama.2015.11648. [Context Link 1, 2, 3] View abstract...
20. Fritz JM, et al. Physical therapy referral from primary care for acute back pain with sciatica : a randomized controlled trial. Annals of Internal Medicine 2021;174(1):8-17. DOI: 10.7326/M20-4187. [Context Link 1] View abstract...
21. Rantonen J, et al. The effectiveness of two active interventions compared to self-care advice in employees with non-acute low back symptoms: a randomised, controlled trial with a 4-year follow-up in the occupational health setting. Occupational and Environmental Medicine 2012;69(1):12-20. DOI: 10.1136/oem.2009.054312. [Context Link 1] View abstract...
22. Carayannopoulos AG, Han A. Thoracic sprain or strain. In: Frontera WR, Silver JK, Rizzo TD Jr, editors. Essentials of Physical Medicine and Rehabilitation: Musculoskeletal Disorders, Pain, and Rehabilitation. 4th ed. Philadelphia, PA: Elsevier Saunders; 2019:238-243. [Context Link 1, 2]
23. Southerst D, et al. The effectiveness of noninvasive interventions for musculoskeletal thoracic spine and chest wall pain: a systematic review by the Ontario Protocol for Traffic Injury Management (OPTIMa) collaboration. Journal of Manipulative and Physiological Therapeutics 2015;38(7):521-31. DOI: 10.1016/j.jmpt.2015.06.001. [Context Link 1, 2] View abstract...
24. Crothers AL, French SD, Hebert JJ, Walker BF. Spinal manipulative therapy, Graston technique® and placebo for non-specific thoracic spine pain: a randomised controlled trial. Chiropractic & Manual Therapies 2016;24:16. DOI: 10.1186/s12998-016-0096-9. [Context Link 1, 2] View abstract...
25. Fusco C, Zaina F, Atanasio S, Romano M, Negrini A, Negrini S. Physical exercises in the treatment of adolescent idiopathic scoliosis: an updated systematic review. Physiotherapy Theory and Practice 2011;27(1):80-114. DOI: 10.3109/09593985.2010.533342. [Context Link 1, 2, 3] View abstract...

26. Monticone M, Ambrosini E, Cazzaniga D, Rocca B, Ferrante S. Active self-correction and task-oriented exercises reduce spinal deformity and improve quality of life in subjects with mild adolescent idiopathic scoliosis. Results of a randomised controlled trial. European Spine Journal 2014;23(6):1204-14. DOI: 10.1007/s00586-014-3241-y. [Context Link 1] View abstract...
27. Negrini S, et al. 2016 SOSORT guidelines: orthopaedic and rehabilitation treatment of idiopathic scoliosis during growth. Scoliosis and Spinal Disorders 2018;13:3. DOI: 10.1186/s13013-017-0145-8. (Reaffirmed 2025 Jun) [Context Link 1, 2] View abstract...
28. Thompson JY, Williamson EM, Williams MA, Heine PJ, Lamb SE, ACTIvATeS Study Group. Effectiveness of scoliosis-specific exercises for adolescent idiopathic scoliosis compared with other non-surgical interventions: a systematic review and meta-analysis. Physiotherapy 2019;105(2):214-234. DOI: 10.1016/j.physio.2018.10.004. [Context Link 1] View abstract...
29. Li X, et al. Effect of core-based exercise in people with scoliosis: A systematic review and meta-analysis. Clinical Rehabilitation 2021;35(5):669-680. DOI: 10.1177/0269215520975105. [Context Link 1] View abstract...
30. Kuijper B, Tans JT, Beelen A, Nollet F, de Visser M. Cervical collar or physiotherapy versus wait and see policy for recent onset cervical radiculopathy: randomised trial. British Medical Journal 2009;339:b3883. [Context Link 1, 2, 3] View abstract...
31. Peolsson A, et al. Physical function outcome in cervical radiculopathy patients after physiotherapy alone compared with anterior surgery followed by physiotherapy: a prospective randomized study with a 2-year follow-up. Spine 2013;38(4):300-7. DOI: 10.1097/BRS.0b013e31826d2cbb. [Context Link 1, 2] View abstract...
32. Mostoufi SA. Cervical radiculopathy. In: Frontera WR, Silver JK, Rizzo TD Jr, editors. Essentials of Physical Medicine and Rehabilitation: Musculoskeletal Disorders, Pain, and Rehabilitation. 4th ed. Philadelphia, PA: Elsevier Saunders; 2019:22-28. [Context Link 1, 2, 3]
33. Engquist M, et al. A 5- to 8-year randomized study on the treatment of cervical radiculopathy: anterior cervical decompression and fusion plus physiotherapy versus physiotherapy alone. Journal of Neurosurgery: Spine 2017;26(1):19-27. DOI: 10.3171/2016.6.SPINE151427. [Context Link 1] View abstract...
34. Kuo AA, Tritasavit S, Graham JM. Congenital muscular torticollis and positional plagiocephaly. Pediatrics in Review 2014;35(2):79-87; quiz 87. DOI: 10.1542/pir.35-2-79. [Context Link 1, 2, 3, 4, 5, 6, 7, 8, 9, 10] View abstract...
35. Sargent B, Coulter C, Cannoy J, Kaplan SL. Physical Therapy Management of Congenital Muscular Torticollis: A 2024 Evidence-Based Clinical Practice Guideline From the American Physical Therapy Association Academy of Pediatric Physical Therapy. Pediatric Physical Therapy 2024;36(4):370-421. DOI: 10.1097/PEP.0000000000001114. (Reaffirmed 2025 Jul 01) [Context Link 1, 2, 3, 4, 5, 6, 7, 8] View abstract...
36. Antares JB, et al. Efficacy of non-surgical, non-pharmacological treatments for congenital muscular torticollis: a systematic review and meta-analysis. BMC Musculoskeletal Disorders 2025;26(1):178. DOI: 10.1186/s12891-025-08407-3. [Context Link 1] View abstract...
37. Jakes AD, Phillips R, Scales M. Teenagers with back pain. British Medical Journal 2015;350:h1275. [Context Link 1, 2, 3, 4, 5, 6] View abstract...
38. Hoffmann TC, et al. Prescribing exercise interventions for patients with chronic conditions. Canadian Medical Association Journal 2016;188(7):510-518. DOI: 10.1503/cmaj.150684. [Context Link 1, 2, 3, 4] View abstract...
39. Hayden JA, Ellis J, Oglivie R, et al. Exercise therapy for chronic low back pain. Cochrane Database of Systematic Reviews 2021, (verified by Cochrane 2021 Sep 28), Issue 9. Art. No.: CD009790. DOI: 10.1002/14651858.CD009790.pub2. [Context Link 1, 2] View abstract...
40. Kamper SJ, et al. Multidisciplinary biopsychosocial rehabilitation for chronic low back pain. Cochrane Database of Systematic Reviews 2014, Issue 9. Art. No.: CD000963. DOI: 10.1002/14651858.CD000963.pub3. [Context Link 1] View abstract...
41. Mudd E, et al. Healthy lifestyle care vs guideline-based care for low back Pain: a randomized clinical trial. JAMA Network Open 2025;8(1):e2453807. DOI: 10.1001/jamanetworkopen.2024.53807. [Context Link 1] View abstract...
42. Bruce-Low S, Smith D, Burnet S, Fisher J, Bissell G, Webster L. One lumbar extension training session per week is sufficient for strength gains and reductions in pain in patients with chronic low back pain ergonomics. Ergonomics 2012;55(4):500-7. DOI: 10.1080/00140139.2011.644329. [Context Link 1] View abstract...
43. Pieber K, Herceg M, Quittan M, Csapo R, Muller R, Wiesinger GF. Long-term effects of an outpatient rehabilitation program in patients with chronic recurrent low back pain. European Spine Journal 2014;23(4):779-85. DOI: 10.1007/s00586-013-3156-z. [Context Link 1, 2] View abstract...
44. Oesch P, Kool J, Hagen KB, Bachmann S. Effectiveness of exercise on work disability in patients with non-acute non-specific low back pain: Systematic review and meta-analysis of randomised controlled trials. Journal of Rehabilitation Medicine 2010;42(3):193-205. DOI: 10.2340/16501977-0524. [Context Link 1] View abstract...
45. Ferreira ML, Smeets RJ, Kamper SJ, Ferreira PH, Machado LA. Can we explain heterogeneity among randomized clinical trials of exercise for chronic back pain? A meta-regression analysis of randomized controlled trials. Physical Therapy 2010;90(10):1383-403. DOI: 10.2522/ptj.20090332. [Context Link 1] View abstract...
46. Michaleff ZA, Kamper SJ, Maher CG, Evans R, Broderick C, Henschke N. Low back pain in children and adolescents: a systematic review and meta-analysis evaluating the effectiveness of conservative interventions. European Spine Journal 2014;23(10):2046-2058. DOI: 10.1007/s00586-014-3461-1. [Context Link 1] View abstract...
47. Bertozzi L, et al. Effect of therapeutic exercise on pain and disability in the management of chronic nonspecific neck pain: systematic review and meta-analysis of randomized trials. Physical Therapy 2013;93(8):1026-36. DOI: 10.2522/ptj.20120412. [Context Link 1, 2] View abstract...
48. Gross A, et al. Exercises for mechanical neck disorders. Cochrane Database of Systematic Reviews 2015, Issue 1. Art. No.: CD004250. DOI: 10.1002/14651858.CD004250.pub5. [Context Link 1, 2] View abstract...

49. Monticone M, et al. Group-based multimodal exercises integrated with cognitive-behavioural therapy improve disability, pain and quality of life of subjects with chronic neck pain: a randomized controlled trial with one-year follow-up. Clinical Rehabilitation 2017;31(6):742-752. DOI: 10.1177/0269215516651979. [Context Link 1, 2] View abstract...
50. Andersen LL, Saervoll CA, Mortensen OS, Poulsen OM, Hannerz H, Zebis MK. Effectiveness of small daily amounts of progressive resistance training for frequent neck/shoulder pain: randomised controlled trial. Pain 2011;152(2):440-6. DOI: 10.1016/j.pain.2010.11.016. [Context Link 1, 2] View abstract...
51. Broetz D, Burkard S, Weller M. A prospective study of mechanical physiotherapy for lumbar disk prolapse: five year follow-up and final report. NeuroRehabilitation 2010;26(2):155-8. DOI: 10.3233/NRE-2010-0547. [Context Link 1, 2, 3] View abstract...
52. Simon J, McAuliffe M, Shamim F, Vuong N, Tahaei A. Discogenic low back pain. Physical Medicine and Rehabilitation Clinics 2014;25(2):305-317. DOI: 10.1016/j.pmr.2014.01.006. [Context Link 1, 2] View abstract...
53. Ellenberg MJ, Ellenberg M. Lumbar radiculopathy. In: Frontera WR, Silver JK, Rizzo TD Jr, editors. Essentials of Physical Medicine and Rehabilitation: Musculoskeletal Disorders, Pain, and Rehabilitation. 4th ed. Philadelphia, PA: Elsevier Saunders; 2019:257-263. [Context Link 1, 2]
54. Franca FJR, et al. Motor control training compared to transcutaneous electrical nerve stimulation in patients with disc herniation with associated radiculopathy: a randomized controlled trial. American Journal of Physical Medicine and Rehabilitation 2019;98(3):207-214. DOI: 10.1097/PHM.0000000000001048. [Context Link 1] View abstract...
55. Kreiner DS, et al. An evidence-based clinical guideline for the diagnosis and treatment of lumbar disc herniation with radiculopathy. Spine Journal 2014;14(1):180-91. DOI: 10.1016/j.spinee.2013.08.003. [Context Link 1] View abstract...
56. Macedo LG, et al. Physical therapy interventions for degenerative lumbar spinal stenosis: a systematic review. Physical Therapy 2013;93(12):1646-60. DOI: 10.2522/ptj.20120379. [Context Link 1, 2] View abstract...
57. Jarrett MS, Orlando JF, Grimmer-Somers K. The effectiveness of land based exercise compared to decompressive surgery in the management of lumbar spinal-canal stenosis: a systematic review. BMC Musculoskeletal Disorders 2012;13:30. DOI: 10.1186/1471-2474-13-30. [Context Link 1, 2] View abstract...
58. Delitto A, et al. Surgery versus onsurgical treatment of lumbar spinal stenosis: A randomized trial. Annals of Internal Medicine 2015;162(7):465-473. DOI: 10.7326/M14-1420. [Context Link 1, 2, 3] View abstract...
59. Fritz JM, et al. Associations between physical therapy and long-term outcomes for individuals with lumbar spinal stenosis in the SPORT study. Spine Journal 2014;14(8):1611-21. DOI: 10.1016/j.spinee.2013.09.044. [Context Link 1, 2] View abstract...
60. Schneider MJ, et al. Comparative clinical effectiveness of nonsurgical treatment methods in patients with lumbar spinal stenosis: a Randomized Clinical Trial. JAMA Network Open 2019;2(1):e186828. DOI: 10.1001/jamanetworkopen.2018.6828. [Context Link 1, 2] View abstract...
61. Minetama M, et al. Supervised physical therapy versus unsupervised exercise for patients with lumbar spinal stenosis: 1-year follow-up of a randomized controlled trial. Clinical Rehabilitation 2021;35(7):964-975. DOI: 10.1177/0269215520986688. [Context Link 1] View abstract...
62. Kreiner DS, et al. Diagnosis and Treatment of Degenerative Lumbar Spinal Stenosis. Evidence-Based Clinical Guidelines for Multidisciplinary Spine Care [Internet] North American Spine Society. 2011 Accessed at: https://www.spine.org/. [accessed 2025 Nov 20] [Context Link 1]
63. Lamb SE, et al. Emergency department treatments and physiotherapy for acute whiplash: a pragmatic, two-step, randomised controlled trial. Lancet 2013;381(9866):546-56. DOI: 10.1016/S0140-6736(12)61304-X. [Context Link 1, 2] View abstract...
64. Sutton DA, et al. Is multimodal care effective for the management of patients with whiplash-associated disorders or neck pain and associated disorders? A systematic review by the Ontario Protocol for Traffic Injury Management (OPTIMa) Collaboration. Spine Journal 2016;16(12):1541-65. DOI: 10.1016/j.spinee.2014.06.019. [Context Link 1] View abstract...
65. Bogaert L, et al. Rehabilitation to improve outcomes of lumbar fusion surgery: a systematic review with meta-analysis. European Spine Journal 2022;31(6):1525-1545. DOI: 10.1007/s00586-022-07158-2. [Context Link 1, 2] View abstract...
66. Poley RE, Borchers JR. Sacroiliac joint dysfunction: evaluation and treatment. Physician and Sportsmedicine 2008;36(1):42-9. DOI: 10.3810/psm.2008.12.10. [Context Link 1, 2, 3, 4] View abstract...
67. Cusi MF. Paradigm for assessment and treatment of SIJ mechanical dysfunction. Journal of Bodywork and Movement Therapies 2010;14(2):152-61. DOI: 10.1016/j.jbmt.2009.12.004. [Context Link 1, 2, 3] View abstract...
68. Centers for Medicare and Medicaid Services. Medicare Benefit Policy Manual. Chapter 15 - Covered Medical and Other Health Services Rev. 13108 [Internet] Centers for Medicare and Medicaid Services. 2025 Apr 11 Accessed at: https://www.cms.gov/manuals/. [accessed 2025 Sep 09] [Context Link 1, 2, 3]
69. Bhatnagar S, Azuh O, Knopp HE. Lumbar degenerative disease. In: Frontera WR, Silver JK, Rizzo TD Jr, editors. Essentials of Physical Medicine and Rehabilitation: Musculoskeletal Disorders, Pain, and Rehabilitation. 4th ed. Philadelphia, PA: Elsevier Saunders; 2019:244-251. [Context Link 1]
70. Winstein CJ, et al. Guidelines for adult stroke rehabilitation and recovery: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. Stroke 2016;47(6):e98-e169. DOI: 10.1161/STR.0000000000000098. (Reaffirmed 2025 Feb) [Context Link 1] View abstract...
71. Rondinelli RD, Ranavaya MI. Practical aspects of impairment rating and disability determination. In: Cifu DX, et al., editors. Braddom's Physical Medicine and Rehabilitation. 6th ed. Philadelphia, PA: Elsevier; 2021:74-88.e2. [Context Link 1]

72. Skelly AC, et al. Noninvasive Nonpharmacological Treatment for Chronic Pain. Comparative Effectiveness Review #227 AHRQ Publication No. 18-EHC013-EF [Internet] Agency for Healthcare Research and Quality (AHRQ). 2020 Apr Accessed at: https://www.effectivehealthcare.ahrq.gov/. [accessed 2025 Sep 03] DOI: 10.23970/AHRQEPCCER227. [Context Link 1, 2]
73. Maharty DC, Hines SC, Brown RB. Chronic low back pain in adults: evaluation and management. American Family Physician 2024;109(3):233-244. [Context Link 1, 2] View abstract...
74. Martinez-Calderon J, Flores-Cortes M, Morales-Asencio JM, Luque-Suarez A. Conservative interventions reduce fear in individuals with chronic low back pain: a systematic review. Archives of Physical Medicine and Rehabilitation 2019;101(2):329-358. DOI: 10.1016/j.apmr.2019.08.470. [Context Link 1] View abstract...
75. National Academies of Sciences, Engineering, and Medicine. Functional Assessment for Adults With Disabilities. Washington DC: The National Academies Press, 2019. [Context Link 1]
76. Salo P, Ylonen-Kayra N, Hakkinen A, Kautiainen H, Malkia E, Ylinen J. Effects of long-term home-based exercise on health-related quality of life in patients with chronic neck pain: a randomized study with a 1-year follow-up. Disability and Rehabilitation 2012;34(23):1971-7. DOI: 10.3109/09638288.2012.665128. [Context Link 1, 2, 3] View abstract...
77. Eubanks JD. Cervical radiculopathy: nonoperative management of neck pain and radicular symptoms. American Family Physician 2010;81(1):33-40. [Context Link 1, 2] View abstract...
78. Darlow B, Perry M, Dean S, Mathieson F, Baxter GD, Dowell A. Putting physical activity while experiencing low back pain in context: balancing the risks and benefits. Archives of Physical Medicine and Rehabilitation 2016;97(2):245-251.e7. DOI: 10.1016/j.apmr.2015.09.020. [Context Link 1] View abstract...
79. Semrau J, et al. Long-term effects of interprofessional biopsychosocial rehabilitation for adults with chronic non-specific low back pain: a multicentre, quasi-experimental study. PLoS ONE 2015;10(3):e0118609. DOI: 10.1371/journal.pone.0118609. [Context Link 1, 2] View abstract...
80. Nicholas MK, George SZ. Psychologically informed interventions for low back pain: an update for physical therapists. Physical Therapy 2011;91(5):765-76. DOI: 10.2522/ptj.20100278. [Context Link 1] View abstract...
81. Marchand GH, et al. Change in pain, disability and influence of fear-avoidance in a work-focused intervention on neck and back pain: a randomized controlled trial. BMC Musculoskeletal Disorders 2015;16:94. DOI: 10.1186/s12891-015-0553-y. [Context Link 1] View abstract...
82. Zhou T, Salman D, McGregor AH. Recent clinical practice guidelines for the management of low back pain: a global comparison. BMC Musculoskeletal Disorders 2024;25(1):Online. DOI: 10.1186/s12891-024-07468-0. [Context Link 1, 2] View abstract...
83. Rivest K, Cote JN, Dumas JP, Sterling M, De Serres SJ. Relationships between pain thresholds, catastrophizing and gender in acute whiplash injury. Manual Therapy 2010;15(2):154-9. DOI: 10.1016/j.math.2009.10.001. [Context Link 1] View abstract...
84. Williamson E, Williams MA, Gates S, Lamb SE. Risk factors for chronic disability in a cohort of patients with acute whiplash associated disorders seeking physiotherapy treatment for persisting symptoms. Physiotherapy 2015;101(1):34-43. DOI: 10.1016/j.physio.2014.04.004. [Context Link 1, 2] View abstract...
85. Heidenreich E, Johnson R, Sargent B. Informing the update to the physical therapy management of Congenital Muscular Torticollis evidence-based clinical practice guideline. Pediatric Physical Therapy 2018;30(3):164-175. DOI: 10.1097/PEP.0000000000000517. [Context Link 1, 2, 3, 4, 5, 6] View abstract...
86. Lambeek LC, Bosmans JE, Van Royen BJ, Van Tulder MW, Van Mechelen W, Anema JR. Effect of integrated care for sick listed patients with chronic low back pain: economic evaluation alongside a randomised controlled trial. British Medical Journal 2010;341:c6414. [Context Link 1] View abstract...
87. French SD, Cameron M, Walker BF, Reggars JW, Esterman AJ. Superficial heat or cold for low back pain. Cochrane Database of Systematic Reviews 2006, (verified by Cochrane 2011 Feb), Issue 1. Art. No.: CD004750. DOI: 10.1002/14651858.CD004750.pub2. [Context Link 1, 2] View abstract...
88. Pandya J, Puentedura EJ, Koppenhaver S, Cleland J. Dry needling versus manual therapy for patients with mechanical neck pain: a randomized controlled trial. Journal of Orthopaedic and Sports Physical Therapy 2024;54(4):1-12. DOI: 10.2519/jospt.2024.12091. [Context Link 1] View abstract...
89. Hryvniak D, Wilder RP, Jenkins J, Statuta SM. Therapeutic exercise. In: Cifu DX, et al., editors. Braddom's Physical Medicine and Rehabilitation. 6th ed. Philadelphia, PA: Elsevier; 2021:291-315.e4. [Context Link 1, 2]
90. Stanos SP, Tyburski MD, Harden RN. Chronic pain. In: Cifu DX, et al., editors. Braddom's Physical Medicine and Rehabilitation. 6th ed. Philadelphia, PA: Elsevier; 2021:748-773.e5. [Context Link 1]
91. O'Keeffe M, O'Sullivan P, Purtill H, Bargary N, O'Sullivan K. Cognitive functional therapy compared with a group-based exercise and education intervention for chronic low back pain: a multicentre randomised controlled trial (RCT). British Journal of Sports Medicine 2020;54(13):782-789. DOI: 10.1136/bjsports-2019-100780. [Context Link 1] View abstract...
92. Ma C, Szeto GP, Yan T, Wu S, Lin C, Li L. Comparing biofeedback with active exercise and passive treatment for the management of work-related neck and shoulder pain: a randomized controlled trial. Archives of Physical Medicine and Rehabilitation 2011;92(6):849-858. DOI: 10.1016/j.apmr.2010.12.037. [Context Link 1] View abstract...
93. Parkin-Smith GF, Norman IJ, Briggs E, Angier E, Wood TG, Brantingham JW. A structured protocol of evidence-based conservative care compared with usual care for acute nonspecific low back pain: a randomized clinical trial. Archives of Physical Medicine and Rehabilitation 2012;93(1):11-20. DOI: 10.1016/j.apmr.2011.08.022. [Context Link 1] View abstract...
94. Chiarotto A, Fortunato S, Falla D. Predictors of outcome following a short multimodal rehabilitation program for patients with whiplash associated disorders. European Journal of Physical and Rehabilitation Medicine 2015;51(2):133-41. [Context Link 1] View abstract...
95. Centers for Medicare and Medicaid Services. "Hospital services excluded from payment under the hospital outpatient prospective payment system." 42 CFR 419.22 Washington, DC 2023 Jul [accessed 2025 Jul 22] Accessed at: https://www.ecfr.gov/. [Context Link 1]
96. Centers for Medicare and Medicaid Services. "Requirements relating to basic benefits." 42 CFR 422.101 Washington, DC 2025 Jun 03 [accessed 2025 Jul 23] Accessed at: https://www.ecfr.gov/. [Context Link 1]

97. Centers for Medicare and Medicaid Services. Medicare Benefit Policy Manual. Chapter 14 - Medical Devices Rev. 198 [Internet] Centers for Medicare and Medicaid Services. 2014 Nov 06 Accessed at: https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/. [accessed 2025 Sep 09] [Context Link 1]

98. Centers for Medicare and Medicaid Services. Medicare Benefit Policy Manual. Chapter 16 - General Exclusions From Coverage Rev. 198 [Internet] Centers for Medicare and Medicaid Services. 2014 Nov 06 Accessed at: https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/. [accessed 2025 Sep 09] [Context Link 1]

99. Medicare Coverage Database. [Internet] Centers for Medicare and Medicaid Services. Accessed at: https://www.cms.gov/medicare-coverage-database/search.aspx? Updated 2025 [accessed 2025 Oct 23] [Context Link 1]

Footnotes

[A] Acute, subacute, and chronic low back pain are defined as pain lasting less than 4 weeks, 4 weeks to 12 weeks, and more than 12 weeks, respectively.(4)(10) [A in Context Link 1, 2]

[B] According to the Centers for Medicare and Medicaid Services (CMS), a maintenance therapy program helps to maintain the patient's current condition or to prevent or slow further deterioration. CMS specifies that skilled therapy services are necessary for the performance of a safe and effective maintenance program only when (a) the particular patient's special medical complications require the skills of a qualified therapist to perform a therapy service that would otherwise be considered nonskilled, or (b) the needed therapy procedures are of such complexity that the skills of a qualified therapist are required to perform the procedure.(68) [B in Context Link 1]

Codes

ICD-10 Diagnosis: G54.1, G54.2, G54.3, G54.4, G57.00, G57.01, G57.02, L40.53, M40.00, M40.03, M40.04, M40.05, M40.202, M40.203, M40.204, M40.205, M40.209, M40.292, M41.112, M41.113, M41.114, M41.115, M41.116, M41.117, M41.119, M41.122, M41.123, M41.124, M41.125, M41.126, M41.127, M41.129, M41.20, M41.22, M41.23, M41.24, M41.25, M41.26, M41.27, M41.34, M41.40, M41.41, M41.42, M41.43, M41.44, M41.45, M41.46, M41.47, M41.50, M41.52, M41.53, M41.54, M41.55, M41.56, M41.57, M41.86, M41.9, M43.00, M43.01, M43.02, M43.03, M43.04, M43.05, M43.06, M43.07, M43.08, M43.09, M43.10, M43.11, M43.12, M43.13, M43.14, M43.15, M43.16, M43.17, M43.18, M43.19, M43.20, M43.21, M43.22, M43.23, M43.24, M43.25, M43.26, M43.27, M43.28, M43.6, M46.00, M46.01, M46.02, M46.03, M46.04, M46.05, M46.06, M46.07, M46.08, M46.09, M46.1, M46.40, M46.41, M46.43, M46.46, M46.47, M46.49, M46.92, M46.96, M47.011, M47.013, M47.014, M47.015, M47.016, M47.019, M47.021, M47.022, M47.029, M47.11, M47.12, M47.13, M47.14, M47.16, M47.20, M47.21, M47.22, M47.23, M47.24, M47.25, M47.26, M47.27, M47.28, M47.811, M47.812, M47.813, M47.814, M47.815, M47.816, M47.817, M47.818, M47.819, M47.891, M47.892, M47.893, M47.894, M47.895, M47.896, M47.897, M47.898, M47.899, M47.9, M48.00, M48.01, M48.02, M48.03, M48.04, M48.05, M48.061, M48.062, M48.07, M50.00, M50.01, M50.020, M50.021, M50.022, M50.023, M50.03, M50.10, M50.11, M50.120, M50.121, M50.122, M50.123, M50.13, M50.20, M50.21, M50.220, M50.221, M50.222, M50.223, M50.23, M50.30, M50.31, M50.320, M50.321, M50.322, M50.323, M50.33, M50.80, M50.81, M50.820, M50.821, M50.822, M50.823, M50.83, M50.90, M50.91, M50.920, M50.921, M50.922, M50.923, M50.93, M51.04, M51.05, M51.06, M51.14, M51.15, M51.16, M51.17, M51.24, M51.25, M51.26, M51.27, M51.34, M51.35, M51.360, M51.361, M51.362, M51.369, M51.370, M51.371, M51.372, M51.379, M51.84, M51.85, M51.86, M51.87, M51.9, M51.A0, M51.A1, M51.A2, M51.A3, M51.A4, M51.A5, M53.0, M53.1, M53.2X6, M53.2X7, M53.2X8, M53.3, M53.80, M53.81, M53.82, M53.83, M53.84, M53.85, M53.86, M53.87, M53.88, M53.9, M54.00, M54.01, M54.02, M54.03, M54.04, M54.05, M54.06, M54.07, M54.08, M54.09, M54.11, M54.12, M54.14, M54.15, M54.16, M54.17, M54.2, M54.30, M54.31, M54.32, M54.40, M54.41, M54.42, M54.50, M54.51, M54.59, M54.6, M54.81, M54.89, M54.9, M60.10, M60.18, M60.19, M60.20, M60.28, M60.80, M60.9, M62.08, M62.10, M62.18, M62.40, M62.48, M62.49, M62.5A0, M62.5A1, M62.5A2, M62.5A9, M62.830, M62.85, M62.89, M62.9, M63.80, M63.88, M63.89, M67.20, M67.28, M67.29, M67.30, M67.38, M67.39, M67.40, M67.48, M67.49, M67.80, M67.88, M67.89, M67.90, M67.98, M67.99, M96.1, M99.01, M99.02, M99.03, M99.04, M99.10, M99.11, M99.12, M99.13, M99.14, M99.15, M99.16, M99.17, M99.18, M99.19, M99.21, M99.22, M99.23, M99.24, M99.31, M99.32, M99.33, M99.34, M99.41, M99.42, M99.43, M99.44, M99.51, M99.52, M99.53, M99.54, M99.62, M99.63, M99.64, M99.71, M99.72, M99.73, M99.74, M99.81, M99.82, M99.83, M99.84, Q67.5, Q68.0, Q76.2, Q76.3, Q76.411, Q76.412, Q76.413, Q76.414, Q76.415, Q76.419, Q76.425, Q76.426, Q76.427, Q76.428, Q76.429, Q76.49, R10.A0, R10.A1, R10.A2, R10.A3, S13.0XXA, S13.0XXD, S13.0XXS, S13.100A, S13.100D, S13.100S, S13.101A, S13.101D, S13.101S, S13.110A, S13.110D, S13.110S, S13.120A, S13.120D, S13.120S, S13.121A, S13.121D, S13.121S, S13.130A, S13.130D, S13.130S, S13.131A, S13.131D, S13.131S, S13.140A, S13.140D, S13.140S, S13.141A, S13.141D, S13.141S, S13.150A, S13.150D, S13.150S, S13.151A, S13.151D, S13.151S, S13.160A, S13.160D, S13.160S, S13.161A, S13.161D, S13.161S, S13.170A, S13.170D, S13.170S, S13.171A, S13.171D, S13.171S, S13.180A, S13.180D, S13.180S, S13.181A, S13.181D, S13.181S, S13.20XA, S13.20XD, S13.20XS, S13.29XA, S13.29XD, S13.29XS, S13.4XXA, S13.4XXD, S13.4XXS, S13.8XXA, S13.8XXD, S13.8XXS, S13.9XXA, S13.9XXD, S13.9XXS, S16.1XXA, S16.1XXD, S16.1XXS, S16.9XXA, S16.9XXD, S16.9XXS, S23.0XXA, S23.0XXD, S23.0XXS, S23.100A, S23.100D, S23.100S, S23.101A, S23.101D, S23.101S, S23.110A, S23.110D, S23.110S, S23.111A, S23.111D, S23.111S, S23.120A, S23.120D, S23.120S, S23.121A, S23.121D, S23.121S, S23.122A, S23.122D, S23.122S, S23.123A, S23.123D, S23.123S, S23.130A, S23.130D, S23.130S, S23.131A, S23.131D, S23.131S, S23.132A, S23.132D, S23.132S, S23.133A, S23.133D, S23.133S, S23.140A, S23.140D, S23.140S, S23.141A, S23.141D, S23.141S, S23.142A, S23.142D, S23.142S, S23.143A, S23.143D, S23.143S, S23.150A, S23.150D, S23.150S, S23.151A, S23.151D, S23.151S, S23.152A, S23.152D, S23.152S, S23.153A, S23.153D, S23.153S, S23.160A, S23.160D, S23.160S, S23.161A, S23.161D, S23.161S, S23.162A, S23.162D, S23.162S, S23.163A, S23.163D, S23.163S, S23.170A, S23.170D, S23.170S, S23.171A, S23.171D, S23.171S, S23.3XXA, S23.3XXD, S23.3XXS, S23.8XXA, S23.8XXD, S23.8XXS, S23.9XXA, S23.9XXD, S23.9XXS, S29.012A, S29.012D, S29.012S, S30.0XXA, S30.0XXD, S30.0XXS, S33.0XXA, S33.0XXD, S33.0XXS, S33.100A, S33.100D, S33.100S, S33.101A, S33.101D, S33.101S, S33.110A, S33.110D, S33.110S, S33.111A, S33.111D, S33.111S, S33.120A, S33.120D, S33.120S, S33.121A, S33.121D, S33.121S, S33.130A, S33.130D, S33.130S, S33.131A, S33.131D, S33.131S, S33.140A, S33.140D, S33.140S, S33.141A, S33.141D, S33.141S, S33.2XXA, S33.2XXD, S33.2XXS, S33.30XA, S33.30XD, S33.30XS, S33.39XA, S33.39XD, S33.39XS, S33.5XXA, S33.5XXD, S33.5XXS, S33.6XXA, S33.6XXD, S33.6XXS, S33.8XXA, S33.8XXD, S33.8XXS, S33.9XXA, S33.9XXD, S33.9XXS, S39.012A, S39.012D, S39.012S, S39.92XA, S39.92XD, S39.92XS, Z51.89, Z71.82, Z71.89 [Hide]

CPT®: 97035, 97036, 97037, 97039, 97110, 97112, 97113, 97161, 97162, 97163, 97164, 97530

HCPCS: G0151, S8990

Last Update: 1/25/2026 1:44:14 AM
Build Number: 30.0.20260125000524.025256