

Chronic Pain

REFERENCES - FURTHER READING

Chronic Pain Explained: Break the Cycle & Regain Control

1. Katz WA. The needs of a patient in pain. *The American Journal of Medicine* 1998;105(1, Supplement 2):2S-7S. doi: [https://doi.org/10.1016/S0002-9343\(98\)00068-0](https://doi.org/10.1016/S0002-9343(98)00068-0)
2. Seymour B. Pain: A Precision Signal for Reinforcement Learning and Control. *Neuron* 2019;101(6):1029-41. doi: 10.1016/j.neuron.2019.01.055 [published Online First: 2019/03/22]
3. Holt K, Russell D, Cooperstein R, et al. Interexaminer reliability of a multidimensional battery of tests used to assess for vertebral subluxations. *Chiropr J Aust* 2018;46(1):101-17.
4. Fenton BW, Shih E, Zolton J. The neurobiology of pain perception in normal and persistent pain. *Pain management* 2015;5(4):297-317. doi: 10.2217/pmt.15.27 [published Online First: 2015/06/20]
5. Koyama T, McHaffie JG, Laurienti PJ, et al. The subjective experience of pain: Where expectations become reality. *Proceedings of the National Academy of Sciences* 2005;102(36):12950-55. doi: 10.1073/pnas.0408576102
6. Mitsi V, Zachariou V. Modulation of pain, nociception, and analgesia by the brain reward center. *Neuroscience* 2016;338:81-92. doi: 10.1016/j.neuroscience.2016.05.017
7. Ploghaus A. Dissociating Pain from Its Anticipation in the Human Brain. *Science* 1999;284(5422):1979-81. doi: 10.1126/science.284.5422.1979
8. Wager TD. Placebo-Induced Changes in fMRI in the Anticipation and Experience of Pain. *Science* 2004;303(5661):1162-67. doi: 10.1126/science.1093065
9. Wiech K. Deconstructing the sensation of pain: The influence of cognitive processes on pain perception. *Science* 2016;354(6312):584-87. doi: 10.1126/science.aaf8934 [published Online First: 2016/11/05]

REFERENCES - FURTHER READING

10. Świeboda P, Filip R, Prystupa A, et al. Assessment of pain: types, mechanism and treatment. *Pain* 2013;2(7)
11. Costigan M, Scholz J, Woolf CJ. Neuropathic Pain: A Maladaptive Response of the Nervous System to Damage. *Annual Review of Neuroscience* 2009;32(1):1-32. doi: 10.1146/annurev.neuro.051508.135531
12. Bannister K, Kucharczyk M, Dickenson AH. Hopes for the future of pain control. *Pain and Therapy* 2017;6(2):117-28.
13. St Sauver JL, Warner DO, Yawn BP, et al. Why patients visit their doctors: assessing the most prevalent conditions in a defined American population. *Mayo Clin Proc* 2013;88(1):56-67. doi: 10.1016/j.mayocp.2012.08.020 [published Online First: 2013/01/01]
14. Bonakdar RA. Integrative pain management. *Medical Clinics* 2017;101(5):987-1004.
15. Webb R, Brammah T, Lunt M, et al. Prevalence and Predictors of Intense, Chronic, and Disabling Neck and Back Pain in the UK General Population. *Spine* 2003;28(11):1195-202. doi: 10.1097/01.brs.0000067430.49169.01
16. Mallen C, Peat G, Thomas E, et al. Severely disabling chronic pain in young adults: prevalence from a population-based postal survey in North Staffordshire. *BMC Musculoskeletal Disorders* 2005;6(1):42. doi: 10.1186/1471-2474-6-42
17. Apkarian AV, Hashmi JA, Baliki MN. Pain and the brain: specificity and plasticity of the brain in clinical chronic pain. *Pain* 2011;152(3 Suppl):S49.
18. Atlas LY, Bolger N, Lindquist MA, et al. Brain Mediators of Predictive Cue Effects on Perceived Pain. 2010;30(39):12964-77. doi: 10.1523/jneurosci.0057-10.2010
19. deCharms RC, Maeda F, Glover GH, et al. Control over brain activation and pain learned by using real-time functional MRI. *Proc Natl Acad Sci U S A* 2005;102(51):18626-31. doi: 10.1073/pnas.0505210102
20. Geneen LJ, Moore RA, Clarke C, et al. Physical activity and exercise for chronic pain in adults: an overview of Cochrane Reviews. *The Cochrane database of systematic reviews* 2017;4:Cd011279. doi: 10.1002/14651858.CD011279.pub3 [published Online First: 2017/04/25]
21. Booth J, Moseley GL, Schiltenswolf M, et al. Exercise for chronic musculoskeletal pain: A biopsychosocial approach. *Musculoskeletal care* 2017;15(4):413-21. doi: 10.1002/msc.1191 [published Online First: 2017/04/04]
22. O'Connor SR, Tully MA, Ryan B, et al. Walking exercise for chronic musculoskeletal pain: systematic review and meta-analysis. *Archives of physical medicine and rehabilitation* 2015;96(4):724-

REFERENCES - FURTHER READING

- 34.e3. doi: 10.1016/j.apmr.2014.12.003 [published Online First: 2014/12/23]
23. Schutze R, Rees C, Slater H, et al. 'I call it stinkin' thinkin': A qualitative analysis of metacognition in people with chronic low back pain and elevated catastrophizing. *British journal of health psychology* 2017;22(3):463-80. doi: 10.1111/bjhp.12240 [published Online First: 2017/04/05]
 24. Masino SA, Ruskin DN. Ketogenic diets and pain. *Journal of child neurology* 2013;28(8):993-1001. doi: 10.1177/0883073813487595 [published Online First: 2013/05/18]
 25. Silva AR, Bernardo A, Costa J, et al. Dietary interventions in Fibromyalgia: a systematic review. *Annals of medicine* 2019:1-29. doi: 10.1080/07853890.2018.1564360 [published Online First: 2019/02/09]
 26. Burgess HJ, Burns JW, Buvanendran A, et al. Associations Between Sleep Disturbance and Chronic Pain Intensity and Function: A Test of Direct and Indirect Pathways. *The Clinical journal of pain* 2019 doi: 10.1097/ajp.0000000000000711 [published Online First: 2019/03/27]
 27. Kocur P, Pospieszna B, Choszczewski D, et al. The effects of Nordic walking training on selected upper-body muscle groups in female-office workers: a randomized trial. *Work* 2017;56(2):277-83.
 28. O'Connor SR, Tully MA, Ryan B, et al. Walking exercise for chronic musculoskeletal pain: systematic review and meta-analysis. *Archives of physical medicine and rehabilitation* 2015;96(4):724-34. e3.
 29. Bowering KJ, O'Connell NE, Tabor A, et al. The effects of graded motor imagery and its components on chronic pain: a systematic review and meta-analysis. *The journal of pain : official journal of the American Pain Society* 2013;14(1):3-13. doi: 10.1016/j.jpain.2012.09.007 [published Online First: 2012/11/20]
 30. Mulder T. Motor imagery and action observation: cognitive tools for rehabilitation. *Journal of neural transmission (Vienna, Austria : 1996)* 2007;114(10):1265-78. doi: 10.1007/s00702-007-0763-z [published Online First: 06/20]
 31. Ruffino C, Papaxanthis C, Lebon F. Neural plasticity during motor learning with motor imagery practice: Review and perspectives. *Neuroscience* 2017;341:61-78.
 32. Laird RA, Keating JL, Ussing K, et al. Does movement matter in people with back pain? Investigating 'atypical' lumbo-pelvic kinematics in people with and without back pain using wireless movement sensors. *BMC Musculoskelet Disord* 2019;20(1):28. doi: 10.1186/s12891-018-2387-x [published Online First: 2019/01/20]
 33. Eliks M, Zgorzalewicz-Stachowiak M, Zenczak-Praga K. Application of Pilates-based exercises in the treatment of chronic non-specific low back pain: state of the art. *Postgraduate medical jour-*

REFERENCES - FURTHER READING

- nal 2019;95(1119):41-45. doi: 10.1136/postgradmedj-2018-135920 [published Online First: 2019/01/14]
34. Li Y, Li S, Jiang J, et al. Effects of yoga on patients with chronic nonspecific neck pain: A PRIS-MA systematic review and meta-analysis. *Medicine* 2019;98(8):e14649. doi: 10.1097/md.00000000000014649 [published Online First: 2019/03/01]
 35. Galindez-Ibarbengoetxea X, Setuain I, Andersen LL, et al. Effects of Cervical High-Velocity Low-Amplitude Techniques on Range of Motion, Strength Performance, and Cardiovascular Outcomes: A Review. *Journal of alternative and complementary medicine (New York, NY)* 2017;23(9):667-75. doi: 10.1089/acm.2017.0002 [published Online First: 2017/07/22]
 36. Shaw L, Descarreaux M, Bryans R, et al. A systematic review of chiropractic management of adults with Whiplash-Associated Disorders: recommendations for advancing evidence-based practice and research. *Work* 2010;35(3):369-94.
 37. Brown RA. Spinal Health: The Backbone of Chiropractic's Identity. *Journal of Chiropractic Humanities* 2016;23(1):22-28. doi: <https://doi.org/10.1016/j.echu.2016.07.002>
 38. Hart J. Analysis and Adjustment of Vertebral Subluxation as a Separate and Distinct Identity for the Chiropractic Profession: A Commentary. *J Chiropr Humanit* 2016;23(1):46-52. doi: 10.1016/j.echu.2016.09.002 [published Online First: 2016/12/07]
 39. The Rubicon Group. Definition and Position Statement on the Chiropractic Subluxation. [On-line] Available at: <http://www.therubicongroup.org/#/policies/>: The Rubicon Group, 2017:4.
 40. Henderson CN. The basis for spinal manipulation: chiropractic perspective of indications and theory. *Journal of electromyography and kinesiography* 2012;22(5):632-42.
 41. Haavik H, Kumari N, Holt K, et al. The contemporary model of vertebral column joint dysfunction and impact of high-velocity, low-amplitude controlled vertebral thrusts on neuromuscular function. *European Journal of Applied Physiology* 2021:1-46.
 42. Haavik H, Murphy B. Subclinical neck pain and the effects of cervical manipulation on elbow joint position sense. *J Manipulative Physiol Ther* 2011;34(2):88-97. doi: 10.1016/j.jmpt.2010.12.009 [published Online First: 2011/02/22]
 43. Korakakis V, Giakas G, Sideris V, et al. Repeated end range spinal movement while seated abolishes the proprioceptive deficit induced by prolonged flexed sitting posture. A study assessing the statistical and clinical significance of spinal position sense. *Musculoskeletal science & practice* 2017;31:9-20. doi: 10.1016/j.msksp.2017.06.003 [published Online First: 2017/06/19]
 44. Ruddock JK, Sallis H, Ness A, et al. Spinal manipulation vs sham manipulation for nonspe-

REFERENCES - FURTHER READING

- cific low back pain: a systematic review and meta-analysis. *Journal of chiropractic medicine* 2016;15(3):165-83.
45. Goertz C, Pohlman K, Vining R, et al. Patient-centered outcomes of high-velocity, low-amplitude spinal manipulation for low back pain: a systematic review. *Journal of Electromyography and Kinesiology* 2012;22(5):670-91.
 46. Hidalgo B, Detrembleur C, Hall T, et al. The efficacy of manual therapy and exercise for different stages of non-specific low back pain: an update of systematic reviews. *Journal of Manual & Manipulative Therapy* 2014;22(2):59-74.
 47. Paige NM, Miak-Lye IM, Booth MS, et al. Association of spinal manipulative therapy with clinical benefit and harm for acute low back pain: systematic review and meta-analysis. *Jama* 2017;317(14):1451-60.
 48. Bryans R, Decina P, Descarreaux M, et al. Evidence-based guidelines for the chiropractic treatment of adults with neck pain. *Journal of manipulative and physiological therapeutics* 2014;37(1):42-63.
 49. Wong JJ, Shearer HM, Mior S, et al. Are manual therapies, passive physical modalities, or acupuncture effective for the management of patients with whiplash-associated disorders or neck pain and associated disorders? An update of the Bone and Joint Decade Task Force on Neck Pain and Its Associated Disorders by the OPTIMa collaboration. *The Spine Journal* 2016;16(12):1598-630.
 50. Gross A, Miller J, D'Sylva J, et al. Manipulation or mobilisation for neck pain: a Cochrane Review. *Manual therapy* 2010;15(4):315-33.
 51. Bryans R, Descarreaux M, Duranleau M, et al. Evidence-based guidelines for the chiropractic treatment of adults with headache. *Journal of manipulative and physiological therapeutics* 2011;34(5):274-89.
 52. Rist PM, Hernandez A, Bernstein C, et al. The impact of spinal manipulation on migraine pain and disability: a systematic review and meta-analysis. *Headache: The Journal of Head and Face Pain* 2019;59(4):532-42.
 53. Fernandez M, Moore C, Tan J, et al. Spinal manipulation for the management of cervicogenic headache: A systematic review and meta-analysis. *European Journal of Pain* 2020;24(9):1687-702.
 54. Holt KR, Haavik H, Lee AC, et al. Effectiveness of Chiropractic Care to Improve Sensorimotor Function Associated With Falls Risk in Older People: A Randomized Controlled Trial. *J Manipulative Physiol Ther* 2016 doi: 10.1016/j.jmpt.2016.02.003 [published Online First: 2016/04/07]

REFERENCES - FURTHER READING

Pain is Created in Your Brain

1. Seymour B. Pain: A Precision Signal for Reinforcement Learning and Control. *Neuron* 2019;101(6):1029-41. doi: 10.1016/j.neuron.2019.01.055 [published Online First: 2019/03/22]
2. Koyama T, McHaffie JG, Laurienti PJ, et al. The subjective experience of pain: Where expectations become reality. *Proceedings of the National Academy of Sciences* 2005;102(36):12950-55. doi: 10.1073/pnas.0408576102
3. Hadjistavropoulos TD, S; Goubert, L.; Mogil J.S.; Sullivan, M.J.L.; Vervoort, T.; Craig K.D.; Cano, A.; Jackson, P.L.; Rainville, P.; Williams, A.C.; Fitzgerald, T.D. A Biopsychosocial formulation of pain communication. *Psychological Bulletin* 2011;137(6):910- 39. doi: 10.1037/a0023876
4. Wager TD. Placebo-Induced Changes in fMRI in the Anticipation and Experience of Pain. *Science* 2004;303(5661):1162-67. doi: 10.1126/science.1093065
5. Ploghaus A. Dissociating Pain from Its Anticipation in the Human Brain. *Science* 1999;284(5422):1979-81. doi: 10.1126/science.284.5422.1979
6. Curatolo M, Arendt-Nielsen L, Petersen-Felix S. Central Hypersensitivity in Chronic Pain: Mechanisms and Clinical Implications. *Physical Medicine and Rehabilitation Clinics of North America* 2006;17(2):287-302. doi: 10.1016/j.pmr.2005.12.010
7. Fenton BW, Shih E, Zolton J. The neurobiology of pain perception in normal and persistent pain. *Pain management* 2015;5(4):297-317. doi: 10.2217/pmt.15.27 [published Online First: 2015/06/20]
8. Mitsi V, Zachariou V. Modulation of pain, nociception, and analgesia by the brain reward center. *Neuroscience* 2016;338:81-92. doi: 10.1016/j.neuroscience.2016.05.017
9. Apkarian AV, Hashmi JA, Baliki MN. Pain and the brain: specificity and plasticity of the brain in clinical chronic pain. *Pain* 2011;152(3 Suppl):S49.
10. Atlas LY, Bolger N, Lindquist MA, et al. Brain Mediators of Predictive Cue Effects on Perceived Pain. 2010;30(39):12964-77. doi: 10.1523/jneurosci.0057-10.2010
11. May A. Chronic pain may change the structure of the brain. *PAIN®* 2008;137(1):7-15. doi: <https://doi.org/10.1016/j.pain.2008.02.034>

REFERENCES - FURTHER READING

12. Costigan M, Scholz J, Woolf CJ. Neuropathic Pain: A Maladaptive Response of the Nervous System to Damage. *Annual Review of Neuroscience* 2009;32(1):1-32. doi: 10.1146/annurev.neuro.051508.135531
13. Draganski B, Gaser C, Busch V, et al. Changes in grey matter induced by training. *Nature* 2004;427(6972):311-12. doi: 10.1038/427311a
14. Kolb B, Whishaw IQ. BRAIN PLASTICITY AND BEHAVIOR. *Annual Review of Psychology* 1998;49(1):43-64. doi: 10.1146/annurev.psych.49.1.43
15. Ungerleider L. Imaging Brain Plasticity during Motor Skill Learning. 2002;78(3):553-64. doi: 10.1006/nlme.2002.4091
16. Ruddock JK, Sallis H, Ness A, et al. Spinal manipulation vs sham manipulation for nonspecific low back pain: a systematic review and meta-analysis. *Journal of chiropractic medicine* 2016;15(3):165-83.
17. Goertz C, Pohlman K, Vining R, et al. Patient-centered outcomes of high-velocity, low-amplitude spinal manipulation for low back pain: a systematic review. *Journal of Electromyography and Kinesiology* 2012;22(5):670-91.
18. Hidalgo B, Detrembleur C, Hall T, et al. The efficacy of manual therapy and exercise for different stages of non-specific low back pain: an update of systematic reviews. *Journal of Manual & Manipulative Therapy* 2014;22(2):59-74.
19. Paige NM, Miak-Lye IM, Booth MS, et al. Association of spinal manipulative therapy with clinical benefit and harm for acute low back pain: systematic review and meta-analysis. *Jama* 2017;317(14):1451-60.
20. Bryans R, Decina P, Descarreaux M, et al. Evidence-based guidelines for the chiropractic treatment of adults with neck pain. *Journal of manipulative and physiological therapeutics* 2014;37(1):42-63.
21. Wong JJ, Shearer HM, Mior S, et al. Are manual therapies, passive physical modalities, or acupuncture effective for the management of patients with whiplash-associated disorders or neck pain and associated disorders? An update of the Bone and Joint Decade Task Force on Neck Pain and Its Associated Disorders by the OPTIMa collaboration. *The Spine Journal* 2016;16(12):1598-630.
22. Gross A, Miller J, D'Sylva J, et al. Manipulation or mobilisation for neck pain: a Cochrane Review. *Manual therapy* 2010;15(4):315-33.

REFERENCES - FURTHER READING

23. Bryans R, Descarreaux M, Duranleau M, et al. Evidence-based guidelines for the chiropractic treatment of adults with headache. *Journal of manipulative and physiological therapeutics* 2011;34(5):274-89.
24. Rist PM, Hernandez A, Bernstein C, et al. The impact of spinal manipulation on migraine pain and disability: a systematic review and meta-analysis. *Headache: The Journal of Head and Face Pain* 2019;59(4):532-42.
25. Fernandez M, Moore C, Tan J, et al. Spinal manipulation for the management of cervicogenic headache: A systematic review and meta-analysis. *European Journal of Pain* 2020;24(9):1687-702.
26. Haavik H, Kumari N, Holt K, et al. The contemporary model of vertebral column joint dysfunction and impact of high-velocity, low-amplitude controlled vertebral thrusts on neuromuscular function. *European Journal of Applied Physiology* 2021:1-46.
27. Haavik H, Murphy B. The role of spinal manipulation in addressing disordered sensorimotor integration and altered motor control. *J Electromyogr Kinesiol* 2012;22(5):768-76. doi: 10.1016/j.jelekin.2012.02.012 [published Online First: 2012/04/10]
28. Lelic D, Niazi IK, Holt K, et al. Manipulation of Dysfunctional Spinal Joints Affects Sensorimotor Integration in the Prefrontal Cortex: A Brain Source Localization Study. *Neural Plast* 2016;2016:3704964. doi: 10.1155/2016/3704964
29. Lelic D, Niazi IK, Holt K, et al. Manipulation of dysfunctional spinal joints affects sensorimotor integration in the prefrontal cortex: a brain source localization study. *Neural plasticity* 2016;2016
30. Topham L, Gregoire S, Kang H, et al. The transition from acute to chronic pain: dynamic epigenetic reprogramming of the mouse prefrontal cortex up to 1 year after nerve injury. *Pain* 2020;161(10):2394-409. doi: 10.1097/j.pain.0000000000001917 [published Online First: 2020/05/20]
31. Apkarian AV, Baliki MN, Farmer MA. Predicting transition to chronic pain. *Curr Opin Neurol* 2013;26(4):360-7. doi: 10.1097/WCO.0b013e32836336ad [published Online First: 2013/07/05]
32. Eklund A, Jensen I, Lohela-Karlsson M, et al. The Nordic Maintenance Care program: Effectiveness of chiropractic maintenance care versus symptom-guided treatment for recurrent and persistent low back pain—A pragmatic randomized controlled trial. *PLoS One* 2018;13(9):e0203029.
33. Holt K, Russell D, Cooperstein R, et al. Interexaminer reliability of a multidimensional battery of tests used to assess for vertebral subluxations. *Chiropr J Aust* 2018;46(1):101-17.

REFERENCES - FURTHER READING

Pain is our Alarm System

1. Gray H. Gray's anatomy: the anatomical basis of medicine and surgery. 38th ed. London: Churchill Livingstone 1995.
2. Brumagne S, Cordo P, Lysens R, et al. The Role of Paraspinal Muscle Spindles in Lumbosacral Position Sense in Individuals With and Without Low Back Pain. 2000;25(8):989-94. doi: 10.1097/00007632-200004150-00015
3. Szolcsanyi J. Effect of capsaicin on thermoregulation: an update with new aspects. Temperature (Austin, Tex) 2015;2(2):277-96. doi: 10.1080/23328940.2015.1048928 [published Online First: 2016/05/27]
4. Bohlen CJ, Julius D. Receptor-targeting mechanisms of pain-causing toxins: How ow? Toxicon : official journal of the International Society on Toxinology 2012;60(3):254-64. doi: 10.1016/j.toxicon.2012.04.336 [published Online First: 04/14]
5. Moller AR. Sensory systems: Anatomy and Physiology. California: Elsevier Science 2003.
6. Morasso P, Sanguineti V. Self-Organizing Body Schema for Motor Planning. Journal of Motor Behavior 1995;27(1):52-66. doi: 10.1080/00222895.1995.9941699
7. Lackner JR, DiZio P. Vestibular, Proprioceptive, and Haptic Contributions to Spatial Orientation. Annual Review of Psychology 2004;56(1):115-47. doi: 10.1146/annurev.psych.55.090902.142023
8. Kane MJ, Engle RW. The role of prefrontal cortex in working-memory capacity, executive attention, and general fluid intelligence: An individual-differences perspective. Psychon Bull Rev 2002;9(4):637-71. doi: 10.3758/bf03196323
9. Rossi AF, Pessoa L, Desimone R, et al. The prefrontal cortex and the executive control of attention. 2009;192(3):489-97. doi: 10.1007/s00221-008-1642-z
10. Haavik H, Kumari N, Holt K, et al. The contemporary model of vertebral column joint dysfunction and impact of high-velocity, low-amplitude controlled vertebral thrusts on neuromuscular function. European Journal of Applied Physiology 2021:1-46.
11. Lelic D, Niazi IK, Holt K, et al. Manipulation of dysfunctional spinal joints affects sensorimotor integration in the prefrontal cortex: a brain source localization study. Neural plasticity 2016;2016

REFERENCES - FURTHER READING

12. Apkarian AV, Bushnell MC, Treede R-D, et al. Human brain mechanisms of pain perception and regulation in health and disease. *European journal of pain* 2005;9(4):463-84.
13. Koyama T, McHaffie JG, Laurienti PJ, et al. The subjective experience of pain: Where expectations become reality. *Proceedings of the National Academy of Sciences* 2005;102(36):12950-55. doi: 10.1073/pnas.0408576102
14. Ploghaus A. Dissociating Pain from Its Anticipation in the Human Brain. *Science* 1999;284(5422):1979-81. doi: 10.1126/science.284.5422.1979
15. Wiech K. Deconstructing the sensation of pain: The influence of cognitive processes on pain perception. *Science* 2016;354(6312):584-87. doi: 10.1126/science.aaf8934 [published Online First: 2016/11/05]
16. Wager TD. Placebo-Induced Changes in fMRI in the Anticipation and Experience of Pain. *Science* 2004;303(5661):1162-67. doi: 10.1126/science.1093065
17. Loggia ML, Berna C, Kim J, et al. The lateral prefrontal cortex mediates the hyperalgesic effects of negative cognitions in chronic pain patients. *The Journal Of Pain: Official Journal Of The American Pain Society* 2015;16(8):692-99. doi: 10.1016/j.jpain.2015.04.003
18. Seminowicz DA, Moayed M. The Dorsolateral Prefrontal Cortex in Acute and Chronic Pain. *The Journal of Pain* 2017;18(9):1027-35. doi: <https://doi.org/10.1016/j.jpain.2017.03.008>
19. Fenton BW, Shih E, Zolton J. The neurobiology of pain perception in normal and persistent pain. *Pain management* 2015;5(4):297-317. doi: 10.2217/pmt.15.27 [published Online First: 2015/06/20]
20. Kimelberg HK, Nedergaard M. Functions of astrocytes and their potential as therapeutic targets. 2010;7(4):338-53. doi: 10.1016/j.nurt.2010.07.006
21. Apkarian AV, Hashmi JA, Baliki MN. Pain and the brain: specificity and plasticity of the brain in clinical chronic pain. *Pain* 2011;152(3 Suppl):S49.
22. Hadjistavropoulos TD, S; Goubert, L.; Mogil J.S.; Sullivan, M.J.L.; Vervoort, T.; Craig K.D.; Cano, A.; Jackson, P.L.; Rainville, P.; Williams, A.C.; Fitzgerald, T.D. A Biopsychosocial formulation of pain communication. *Psychological Bulletin* 2011;137(6):910- 39. doi: 10.1037/a0023876
23. Mitsi V, Zachariou V. Modulation of pain, nociception, and analgesia by the brain reward center. *Neuroscience* 2016;338:81-92. doi: 10.1016/j.neuroscience.2016.05.017
24. 24. Laird RA, Keating JL, Ussing K, et al. Does movement matter in people with back pain? Investigating 'atypical' lumbo-pelvic kinematics in people with and without back pain using wireless movement sensors. *BMC Musculoskelet Disord* 2019;20(1):28. doi: 10.1186/s12891-018-2387-x [published Online First: 2019/01/20]

REFERENCES - FURTHER READING

25. Cardinali DP. Autonomic Nervous System: basic and clinical aspects. Switzerland: Springer International Publishing 2017.
26. Kolb B, Whishaw IQ. BRAIN PLASTICITY AND BEHAVIOR. Annual Review of Psychology 1998;49(1):43-64. doi: 10.1146/annurev.psych.49.1.43
27. Hannibal KE, Bishop MD. Chronic Stress, Cortisol Dysfunction, and Pain: A Psychoneuroendocrine Rationale for Stress Management in Pain Rehabilitation. Physical Therapy 2014;94(12):1816-25.
28. Brown RA. Spinal Health: The Backbone of Chiropractic's Identity. Journal of Chiropractic Humanities 2016;23(1):22-28. doi: <https://doi.org/10.1016/j.echu.2016.07.002>
29. McManus C. Chronic Stress, Chronic Pain, and the Corticolimbic System. Orthopaedic Physical Therapy Practice 2019;31(1):50-53.
30. Vachon-Preseu E. Effects of stress on the corticolimbic system: implications for chronic pain. Progress in Neuro-Psychopharmacology and Biological Psychiatry 2018;87:216-23. doi: <https://doi.org/10.1016/j.pnpbp.2017.10.014>
31. Melzack R. From the gate to the neuromatrix. Pain 1999;82:S121-S26. doi: 10.1016/s0304-3959(99)00145-1
32. Seymour B. Pain: A Precision Signal for Reinforcement Learning and Control. Neuron 2019;101(6):1029-41. doi: 10.1016/j.neuron.2019.01.055 [published Online First: 2019/03/22]
33. Sjøgaard G, Lundberg U, Kadefors R. The role of muscle activity and mental load in the development of pain and degenerative processes at the muscle cell level during computer work. European Journal of Applied Physiology 2000;83(2-3):99-105. doi: 10.1007/s004210000285
34. Butler D, Moseley AM. Explain Pain. 2 ed: Noigroup Publications 2013.
35. Ruddock JK, Sallis H, Ness A, et al. Spinal manipulation vs sham manipulation for nonspecific low back pain: a systematic review and meta-analysis. Journal of chiropractic medicine 2016;15(3):165-83.
36. Goertz C, Pohlman K, Vining R, et al. Patient-centered outcomes of high-velocity, low-amplitude spinal manipulation for low back pain: a systematic review. Journal of Electromyography and Kinesiology 2012;22(5):670-91.
37. Hidalgo B, Detrembleur C, Hall T, et al. The efficacy of manual therapy and exercise for different stages of non-specific low back pain: an update of systematic reviews. Journal of Manual & Manipulative Therapy 2014;22(2):59-74.

REFERENCES - FURTHER READING

38. Paige NM, Miake-Lye IM, Booth MS, et al. Association of spinal manipulative therapy with clinical benefit and harm for acute low back pain: systematic review and meta-analysis. *Jama* 2017;317(14):1451-60.
39. Bryans R, Decina P, Descarreaux M, et al. Evidence-based guidelines for the chiropractic treatment of adults with neck pain. *Journal of manipulative and physiological therapeutics* 2014;37(1):42-63.
40. Wong JJ, Shearer HM, Mior S, et al. Are manual therapies, passive physical modalities, or acupuncture effective for the management of patients with whiplash-associated disorders or neck pain and associated disorders? An update of the Bone and Joint Decade Task Force on Neck Pain and Its Associated Disorders by the OPTIMa collaboration. *The Spine Journal* 2016;16(12):1598-630.
41. Gross A, Miller J, D'Sylva J, et al. Manipulation or mobilisation for neck pain: a Cochrane Review. *Manual therapy* 2010;15(4):315-33.
42. Bryans R, Descarreaux M, Duranleau M, et al. Evidence-based guidelines for the chiropractic treatment of adults with headache. *Journal of manipulative and physiological therapeutics* 2011;34(5):274-89.
43. Rist PM, Hernandez A, Bernstein C, et al. The impact of spinal manipulation on migraine pain and disability: a systematic review and meta-analysis. *Headache: The Journal of Head and Face Pain* 2019;59(4):532-42.
44. Fernandez M, Moore C, Tan J, et al. Spinal manipulation for the management of cervicogenic headache: A systematic review and meta-analysis. *European Journal of Pain* 2020;24(9):1687-702.
45. Schutze R, Rees C, Slater H, et al. 'I call it stinkin' thinkin': A qualitative analysis of metacognition in people with chronic low back pain and elevated catastrophizing. *British journal of health psychology* 2017;22(3):463-80. doi: 10.1111/bjhp.12240 [published Online First: 2017/04/05]
46. Booth J, Moseley GL, Schiltenswolf M, et al. Exercise for chronic musculoskeletal pain: A biopsychosocial approach. *Musculoskeletal care* 2017;15(4):413-21. doi: 10.1002/msc.1191 [published Online First: 2017/04/04]
47. O'Connor SR, Tully MA, Ryan B, et al. Walking exercise for chronic musculoskeletal pain: systematic review and meta-analysis. *Archives of physical medicine and rehabilitation* 2015;96(4):724-34.e3. doi: 10.1016/j.apmr.2014.12.003 [published Online First: 2014/12/23]
48. Masino SA, Ruskin DN. Ketogenic diets and pain. *Journal of child neurology* 2013;28(8):993-1001. doi: 10.1177/0883073813487595 [published Online First: 2013/05/18]

REFERENCES - FURTHER READING

49. Silva AR, Bernardo A, Costa J, et al. Dietary interventions in Fibromyalgia: a systematic review. *Annals of medicine* 2019;1-29. doi: 10.1080/07853890.2018.1564360 [published Online First: 2019/02/09]
50. Burgess HJ, Burns JW, Buvanendran A, et al. Associations Between Sleep Disturbance and Chronic Pain Intensity and Function: A Test of Direct and Indirect Pathways. *The Clinical journal of pain* 2019 doi: 10.1097/ajp.0000000000000711 [published Online First: 2019/03/27]
51. Goertz CM, Pohlman KA, Vining RD, et al. Patient-centered outcomes of high-velocity, low-amplitude spinal manipulation for low back pain: a systematic review. *J Electromyogr Kinesiol* 2012;22(5):670-91. doi: 10.1016/j.jelekin.2012.03.006 [published Online First: 2012/04/27]
52. Ruddock JK, Sallis H, Ness A, et al. Spinal Manipulation Vs Sham Manipulation for Nonspecific Low Back Pain: A Systematic Review and Meta-analysis. *J Chiropr Med* 2016;15(3):165-83. doi: 10.1016/j.jcm.2016.04.014 [published Online First: 2016/09/24]

REFERENCES - FURTHER READING

Break the Pain Cycle

1. Swieboda P, Filip R, Prystupa A, et al. Assessment of pain: types, mechanism and treatment. *Annals of agricultural and environmental medicine : AAEM* 2013;Spec no. 1:2-7. [published Online First: 2014/07/09]
2. Curatolo M, Arendt-Nielsen L, Petersen-Felix S. Central Hypersensitivity in Chronic Pain: Mechanisms and Clinical Implications. *Physical Medicine and Rehabilitation Clinics of North America* 2006;17(2):287-302. doi: 10.1016/j.pmr.2005.12.010
3. Manchikanti L, Singh V, Kaye AD, et al. Lessons for Better Pain Management in the Future: Learning from the Past. *Pain and therapy* 2020 doi: 10.1007/s40122-020-00170-8 [published Online First: 2020/05/16]
4. Genova A, Dix O, Thakur M, et al. Chronic Non-cancer Pain Management and Addiction: A Review. *Cureus* 2020;12(2):e6963-e63. doi: 10.7759/cureus.6963
5. Elma Ö, Yilmaz ST, Deliens T, et al. Chronic Musculoskeletal Pain and Nutrition: Where Are We and Where Are We Heading? *Pm r* 2020 doi: 10.1002/pmrj.12346 [published Online First: 2020/02/23]
6. Suh JH, Kim H, Jung GP, et al. The effect of lumbar stabilization and walking exercises on chronic low back pain: A randomized controlled trial. *Medicine* 2019;98(26):e16173. doi: 10.1097/md.00000000000016173 [published Online First: 2019/07/03]
7. Navid MS, Lelic D, Niazi IK, et al. The effects of chiropractic spinal manipulation on central processing of tonic pain – a pilot study using standardized low-resolution brain electromagnetic tomography (sLORETA). *Sci Rep* 2019;9(1):6925. doi: 10.1038/s41598-019-42984-3 [published Online First: 2019/05/08]
8. Haavik H, Murphy B. The role of spinal manipulation in addressing disordered sensorimotor integration and altered motor control. *J Electromyogr Kinesiol* 2012;22(5):768-76. doi: 10.1016/j.jelekin.2012.02.012 [published Online First: 2012/04/10]
9. Lelic D, Niazi IK, Holt K, et al. Manipulation of Dysfunctional Spinal Joints Affects Sensorimotor Integration in the Prefrontal Cortex: A Brain Source Localization Study. *Neural plasticity* 2016;2016:3704964. doi: 10.1155/2016/3704964
10. Seminowicz DA, Moayed M. The Dorsolateral Prefrontal Cortex in Acute and Chronic Pain. *The journal of pain : official journal of the American Pain Society* 2017;18(9):1027-35. doi:

REFERENCES - FURTHER READING

- 10.1016/j.jpain.2017.03.008 [published Online First: 2017/04/13]
11. Gross A, Langevin P, Burnie SJ, et al. Manipulation and mobilisation for neck pain contrasted against an inactive control or another active treatment. *Cochrane Database Syst Rev* 2015(9):Cd004249. doi: 10.1002/14651858.CD004249.pub4 [published Online First: 2015/09/24]
 12. Gross A, Miller J, D'Sylva J, et al. Manipulation or mobilisation for neck pain: a Cochrane Review. *Man Ther* 2010;15(4):315-33. doi: 10.1016/j.math.2010.04.002 [published Online First: 2010/06/01]
 13. Bryans R, Decina P, Descarreaux M, et al. Evidence-based guidelines for the chiropractic treatment of adults with neck pain. *J Manipulative Physiol Ther* 2014;37(1):42-63. doi: 10.1016/j.jmpt.2013.08.010 [published Online First: 2013/11/23]
 14. Goertz CM, Pohlman KA, Vining RD, et al. Patient-centered outcomes of high-velocity, low-amplitude spinal manipulation for low back pain: a systematic review. *J Electromyogr Kinesiol* 2012;22(5):670-91. doi: 10.1016/j.jelekin.2012.03.006 [published Online First: 2012/04/27]
 15. Ruddock JK, Sallis H, Ness A, et al. Spinal Manipulation Vs Sham Manipulation for Nonspecific Low Back Pain: A Systematic Review and Meta-analysis. *J Chiropr Med* 2016;15(3):165-83. doi: 10.1016/j.jcm.2016.04.014 [published Online First: 2016/09/24]
 16. Bryans R, Descarreaux M, Duranleau M, et al. Evidence-based guidelines for the chiropractic treatment of adults with headache. *J Manipulative Physiol Ther* 2011;34(5):274-89. doi: 10.1016/j.jmpt.2011.04.008 [published Online First: 2011/06/07]

REFERENCES - FURTHER READING

Who sees a Chiropractor?

1. Adams J, Peng W, Cramer H, et al. The Prevalence, Patterns, and Predictors of Chiropractic Use Among US Adults: Results From the 2012 National Health Interview Survey. *Spine (Phila Pa 1976)*. Dec 1 2017;42(23):1810-1816.

How often should you see your chiropractor?

1. Hodges PW, Moseley GL. Pain and motor control of the lumbopelvic region: effect and possible mechanisms. *J Electromyogr Kinesiol*. 2003;13(4):361-370.
2. MacDonald D, Moseley GL, Hodges PW. Why do some patients keep hurting their back? Evidence of ongoing back muscle dysfunction during remission from recurrent back pain. *Pain*. Apr 2009;142(3):183-188.
3. Ferreira ML, Ferreira PH, Hodges PW. Changes in postural activity of the trunk muscles following spinal manipulative therapy *Manual Therapy* August 2007;12(3):240-248.
4. Haas M, Bronfort G, Evans R, et al. Dose-response and efficacy of spinal manipulation for care of cervicogenic headache: a dual-center randomized controlled trial. *Spine J*. Feb 23 2018.



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