NERVOUS SYSTEM

Apkarian AV et al. Human brain mechanisms of pain perception and regulation in health and disease. Eur J Pain. 2005;9:463–484.

Bartley EJ et al. Enhanced pain sensitivity among individuals with symptomatic knee osteoarthritis:

Potential sex differences in central sensitization. Arthritis Care Res (Hoboken). 2015 Oct 5.

Benarroch EE. Pain-autonomic interactions. Neurol Sci. 2006;27(Suppl 2):S130–133.

Black PH. Central nervous system-immune system interactions: Psychoneuroendocrinology of stress and its immune consequences. Antimicrob Agents Chemother. 1994;38:1–6.

Bremner JD. Traumatic stress: Effects on the brain. Dialogues Clin Neurosci. 2006;8(4):445-61.

Bruehl S et al. Altered cardiovascular/pain regulatory relationships in chronic pain. Int J Behav Med. 1998;5:63–75.

Butler D, Moseley GL. Explain Pain. Adelaide: NOI Group Publishing, 2003.

Dubner R. The neurobiology of persistent pain and its clinical implications. Suppl Clin Neurophysiol. 2004;57:3–7.

Dusek JA et al. Genomic counter-stress changes induced by the relaxation response. PLoS One 2008 Jul 2;3(7):e2576.

Dworkin RH et al. Toward a model of the pathogenesis of chronic pain. Semin Clin Neuropsychiatry. 1999;4:176–185.

Elenkov IJ, Chrousos GP. Stress hormones, proinflammatory and antiinflammatory cytokines, and autoimmunity. Ann N Y Acad Sci. 2002;966:290–303.

Flor H et al. Processing of pain- and body-related verbal material in chronic pain patients: central and peripheral correlates. Pain. 1997; Dec73(3):413-421.

Flor H. Painful memories: Can we train chronic pain patients to "forget" their pain. EMBO reports. 2002; 3(4):288-291.

Fritz HC J et al. Chronic back pain is associated with decreased prefrontal and anterior insular gray matter. Results from a population-based cohort study. Pain. 2015 Oct 14

Fritz HC et al. Changes in the brain of LBP sufferers J Pain. 2015 Oct 14.

Glick DB. The autonomic nervous system. In: Miller RD, editor. Miller's Anesthesia. New York, NY, USA: Elsevier; 2009. 261-304.

Ji RR et al. Central sensitization and LTP: Do pain and memory share similar mechanisms? Trends Neurosci. 2003;26:696–705.

Katz J, Melzack R. Pain 'memories' in phantom limbs: Review and clinical observations. Pain. 1990;43:319-336.

Kessler W et al. Excitation of cutaneous afferent nerve endings in vitro by a combination of inflammatory mediators and conditioning effect of substance P. Exp Brain Res. 1992;91:467–476.

Louw A, Puentedura E. Therapeutic Neuroscience Education, Pain, Physiotherapy and the Pain Neuromatrix International Journal of Health Sciences September 2014, Vol. 2, No. 3, pp. 33-45

Melanie L. et al. Evidence of Nervous System Sensitization in Commonly Presenting and Persistent

Painful Tendinopathies: A Systematic Review Journal of Orthopaedic & Sports Physical Therapy, 2015, 45 (11): 864-875

Melzack R. Gait control theory. On the evolution of pain concepts. Pain Forum. 1996;5(1):128-138.

Melzack R. From the gate to the neuromatrix. Pain Suppliment. 1999;6:S121-S126.

Melzack R. Pain-An overview. Acta Anaesthesiol Scand. 1999;43:880-884.

Melzack R. Pain and the neuromatrix in the brain. J Dental Ed. 2001;65(12):1378-1382.

Melzack R. Evolution of the neuromatrix theory of pain. The Prithvi Raj Lecture: Presented at the third world congress of world institute of pain, Barcelona 2004. Pain Practice. 2005;5(2);85-94.

Meyer R. Peripheral mechanisms of cutaneous nociception. Textbook of Pain. London: Elsevier, 2006:3-35.

Moseley GL. Combined physiotherapy and education is efficacious for chronic low back pain. Australian Journal of Physiotherapy. 2002;48:297-302.

Moseley GL. A pain neuromatrix approach to patients with chronic pain. 2003;8(3):130-140.

Moseley GL et al. The threat of predictable and unpredictable pain: Differential effect on central nervous system processing? Australian Journal of Physiotherapy. 2003;49:263-267.

Moseley GL, Hodges PW. Are the changes in postural control associated with low back pain caused by pain interference? Clin J Pain. 2005 Jul-Aug;21(4):323-329.

Moseley GL, Hodges PW. Reduced variability of postural strategy prevents normalization of motor changes induced by back pain: a risk factor for chronic trouble? Behav Neurosci. 2006 Apr;120(2):474-476.

Moseley GL. Reconceptualising pain according to modern pain science. Physical Therapy Reviews. 2007; 12:169-178.

Moseley GL, et al. Thinking about movement hurts: The effect of motor Imagery on pain and swelling in people with chronic arm pain. 2008;59:5:623-631.

Moseley GL. Understanding and Explaining Pain. Course: University of Las Vegas at Las Vegas. August 2010.

Nijs J et al. Recognition of central sensitization in patients with musculoskeletal pain: Application of pain neuro-physiology in manual therapy practice. Manual Therapy 2010; 15:135-141.

Ossipov MH et al. Central modulation of pain. J Clin Invest 2010;120(11):3779-3787.

Pagnoni G, Cekic M, Age effects on grey matter volume and attention performance in Zen meditation. Neurobi-ol Aging. 2007 Oct;28(10):1623-1627.

Planells-Cases R et al. Functional aspects and mechanisms of TRPV1 involvement in neurogenic inflammation that leads to thermal hyperalgesia. Eur J Physiol 2005;451151-159.

Saab CY et al. Alarm or pain? The pain of neuroinflammation. Brain Res Rew. 2008; 58: 226-235.

Schaefer M et al. Fooling your feelings: artificially induced referred sensations are linked to a modulation of the primary somatosensory cortex. Neuroimage 2006 Jan1;29(1):67-3.

Schaefer M et al. Morphing the body: Illusory feeling of an elongated arm affects somatosensory homunculus. Neuroimage 2007 Jul 1;36(3):700-705.

Vanegas H, Schaible HG. Descending control of persistent pain: inhibitory or facilitatory? Brain Res Brain Res Rev. 2004;46:295–309.

Wand BM et al. Managing chronic nonspecific low back pain with a sensorimotor retraining approach: exploratory multiple-baseline study of 3 participants. Phys Ther. 2011 Apr;91(4):535-546.

Wand BM et al. Cortical changes in chronic low back pain: Current state of the art and implications for clinical practice. Manual Therapy 2011;16:15-20.

Younger J et al. Viewing pictures of a romantic partner reduces experimental pain: Involvement of neural re-ward systems. 2010;PLoS:5(10):e13309.

Zeidan F et al. Brain mechanisms supporting the modulation of pain by mindfulness meditation. J Neurosci 2011 Apr 6;31(14):5540-5548.

IMMUNE, STRESS, AND THE GUTS

Andersson J. The inflammatory reflex--introduction. J Intern Med. 2005; 257:122–125.

Anisman H, Merali Z. Cytokines, stress and depressive illness: Brain-immune interactions. Ann Med. 2003;35:2–11.

Bell PG et al. The role of cherries in exercise and health. Scand J Med Sci Sports. 2014 Jun;24(3):477-90.

Bell PG et al. Montmorency cherries reduce the oxidative stress and inflammatory responses to repeated days high-intensity stochastic cycling. Nutrients. 2014 Feb 21;6(2):829-43.

Bell PG et al. Recovery facilitation with Montmorency cherries following high-intensity, metabolically challenging exercise. Appl Physiol Nutr Metab. 2015 Apr;40(4):414-23.

Black PH. Central nervous system-immune system interactions: Psychoneuroendocrinology of stress and its immune consequences. Antimicrobial agents and Chemotherapy 1994 Jan:1-6.

Blalock JE. The immune system as the sixth sense. J Intern Med. 2005;257:126–138.

Blando F ET AL. Sour cherry anthocyanins as ingredients in functional foods. J Biomed Biotechnol. 2004 Dec 1; 2004(5):253-258.

Bowtell JL et al. Montmorency cherry juice reduces muscle damage caused by intensive strength exercise. Med Sci Sports Exerc. 2011 Aug;43(8):1544-1551.

Britton T. Research: dorsal root ganglia study in severe fibromyalgia. BMC Musculoskeletal Disorders, 20 February 2012

Burkhardt S et al. Detection and qualification of the antioxidant melatonin in Montmorency and balaton tart cherries. J Agric Food Chem 2001 Oct;49(10):4898-4902.

Burns L. The best probiotic for gut health. www.livestrong.com/article542071-the-best-probiotic-forgut-health. 9/12/2011

Buskila D. Developments in the scientific and clinical understanding of fibromyalgia. Arthritis Research & Therapy. 2009;11(5) 242

Calder PC, Kew S. The immune system: a target for functional foods? Br J nutr. 2002 Nov;88 suppl 2:S165-177.

Cervero F. Visceral versus somatic pain: similarities and differences. Dig Dis. 2009;27 Suppl 1:3-10.

Cervero F, Laird JM. Understanding the signaling and transmission of visceral nociceptive events. J Neurobiol. 2004 Oct;61(1):45-54.

Chrousos GP, Gold, PW. The concepts of stress and stress system disorders. JAMA 1992;267:1244-1252 Chapman, CR et al. Pain and stress in a system perspective: Reciprocal neural, endocrine and immune interactions. J Pain 2008; Feb 9(2):122-145.

Connolly DA, McHugh MP, Padilla-Zakour OI, Carlson L, Sayers SP. Efficacy of a tart cherry juice blend in pre-venting the symptoms of muscle damage.Br J Sports Med. 2006 Aug;40(8):679-83; discussion 683. Epub 2006 Jun 21.

Damar I. Antioxidant capacity and anthocyanin profile of sour cherry (Prunus cerasus L.) juice. Food Chem. 2012 Dec 15;135(4):2910-4.

Dimitriou L ET AL. Influence of a montmorency cherry juice blend on indices of exercise-induced stress and upper respiratory tract symptoms following marathon running--a pilot investigation. J Int Soc Sports Nutr. 2015 May 11;12:22.

Eriksson EM. Aspects of the non-pharmacological treatment of irritable bowel syndrome. World J Gastroenterol. 2015 Oct 28;21(40):11439-49.

Ferretti G et al. Cherry antioxidants: From farm to table. Molecules 2010 Oct; 15(10):6993-7005.

Galarraga B. Cod liver oil (n-3 fatty acids) as a non-steroidal anti-inflammatory drug sparing agent in rheumatoid arthritis. Rheumatology (Oxford) 2008 May;47(5):665-9.

Garrido M, et al. The consumption of a Jerte Valley cherry product in humans enhances mood, and increases 5-hydroxyindoleacetic acid but reduces cortisol levels in urine. Exp Gerontol. 2012 Aug;47(8):573-80. doi: 10.1016/j.exger.2012.05.003. Epub 2012 May 11.

Gray P et al. Fish oil supplementation reduces markers of oxidative stress but not muscle soreness after eccentric exercise. Int J Sport Nutr Exerc Metab. 2014 Apr;24(2):206-14.

Hill CL. Fish oil in knee osteoarthritis: a randomized clinical trial of low dose versus high dose. Ann Rheum Dis. 2015 Sep 9. 2014-2071

Howatson G et al. Effect of tart cherry juice (Prunus cerasus) on melatonin levels and enhanced sleep quality.

Eur J Nutr 2011 Oct 30 [epub ahead of print]

Howatson G et al. Influence of tart cherry juice on indices of recovery following marathon running. Scand J Med Sci Sports. 2010 Dec;20(6):843-52.

Jouris KB. The Effect of Omega-3 Fatty Acid Supplementation on the Inflammatory Response to eccentric strength exercise. J Sports Sci Med. 2011 Sep 1;10(3):432-8.

Kew S et al. Effects of oils rich in eicosapentaenoic and docosahexaenoic acids on immune cell composition and function in healthy humans. Am J Clin Nutr. 2004 Apr;79(4):674-81.

Kuehl KS et al. Efficacy of tart cherry juice in reducing muscle pain during running: A randomized controlled trial. J Int Soc Sports nutr 2010 May 7;7-17.

Kuehl KS. Cherry juice targets antioxidant potential and pain relief. Med Sport Sci. 2013 ;59:86-93. . 2012 May

Kuehl KS et al. Efficacy of tart cherry juice in reducing muscle pain during running: a randomized controlled trial. J Int Soc Sports Nutr

Lembke P et al. Influence of omega-3 (n3) index on performance and wellbeing in young adults after heavy eccentric exercise. J Sports Sci Med. 2014 Jan 20;13(1):151-6.

Levers K et al. Effects of powdered Montmorency tart cherry supplementation on an acute bout of intense lower body strength exercise in resistance trained males. J Int Soc Sports Nutr. 2015 Nov 16;12:41.

Lila MA. Anthocynins and human health: an in vitro investigational approach. J Biomed Biotechnol. 2004 Dec 1;2004(5):306-313.

Maroon JC, Bost JW. Omega-3 fatty acids (fish oil) as an anti-inflammatory: an alternative to nonsteroidal anti-inflammatory drugs for discogenic pain. Surg Neurol. 2006 Apr;65(4):326-331.

Marynowski M, Role of environmental pollution in irritable bowel syndrome. World J Gastroenterol. 2015 Oct 28;21(40):11371-8.

McCune LM et al. Cherries and health: A review. Crit Rev Food Sci Nutri.2011 Jan;51(1):1-12.

Marchand F et al. Role of the immune system in chronic pain. Nat Rev Neurosci. 2005;6:521–532.

Martinez-Lavin M. Biology and therapy of fibromyalgia. Stress, the stress response system, and fibromyalgia. Arthritis Research and Therapy. 2007;9(4, article 216)

Mulabagal V, Lang GA et al Anthocyanin content, lipid peroxidation and cyclooxygenase enzyme inhibitory activities of sweet and sour cherries. J Agric Food Chem. 2009 Feb 25;57(4):1239-46 Okamoto R, Watanabe M. Role of epithelial cells in the pathogenesis and treatment of inflammatory bowel disease. J Gastroenterol. 2015 Jul 3.

Ou B et al. Processed tart cherry products--comparative phyto-chemical content, in vitro antioxidant capacity and in vitro anti-inflammatory activity. J Food Sci. 2012 May;77(5):H105-12.

Padgett DA, Glaser R. How stress influences the immune response. Trends Immunol. 2003;24:444–448. Parkin J, Cohen B. An overview of the immune system. Lancet. 2001;357:1777–1789. Price DD.

Psychological and neural mechanisms of the affective dimension of pain. Science. 2000;288:1769–1772. Probiotics. www.medicinenet.com/probiotic/article.htm

Rowe AH. Allergic toxemia and migraine due to food allergy. Calif West Med. 1930 Nov;33(5):785-793. Saper CB. The central autonomic nervous system: conscious visceral perception and autonomic pattern generation. Annual Review of Neuroscience. 2002;25:433–469.

Schumacher HR et al. Randomized double-blind crossover study of the efficacy of a tart cherry juice blend in treatment of osteoarthritis (OA) of the knee. Osteoarthritis Cartilage. 2013 Aug;21(8):1035-41. Seeram NP, Momin RA et al. Cyclooxygenase inhibitory and antioxidant cyanidin glycosides in cherries and berries. Phytomedicine. 2001 Sep;8(5):362-9.

Steinman L. Elaborate interactions between the immune and nervous systems. Nat Immunol. 2004;5:575–581.

Tall JM, Raja SN. Dietary constituents as novel therapeutics for pain. Clin J Pain. 2004 Jan-Feb;20(1):19-26.

Thacker M et al. Pathophysiology of peripheral neuropathic pain: immune cells and molecules. Anesth Analg. 2007;105:838-847.

Traustadottir T et al. Tart cherry juice decreases oxidative stress in healthy older men and women. J Nutr 2009 Oct; 139(10):1896-1900.

Tyson A. Aloe Juice Health Benefits. www.livestrong.com/article/288114-aloe-juice-health-benefits/ 10/21/2010

Urch CE. Chapter 244, Pathology of cancer pain. Palliative Medicine, 1st ed. Saunders. 2008.

Van Houdenhove B, Luyten P. Stress, depression and fibromyalgia. Acta Neurologica Belgica.

2006;106(4):149–156

Vergnolle N. Postinflammatory visceral sensitivity and pain mechanisms.

Neurogastroenterol Motil. 2008 May;20 Suppl 1:73-80.

Wang H, Nair MG et al. Antioxidant and antiinflammatory activities of anthocyanins and their aglycon, cyanidin, from tart cherries. J Nat Prod. 1999 Feb;62(2):294-6.

Watkins K*, Josling PD. A pilot study to determine the impact of transdermal magnesium treatment on serum levels and whole body CaMg ratios, United Kingdom, Herbal Research Centre, Battle, United Kingdom.

NUTRITION

Andon MB et al Calcium absorption from apple and orange juice fortified with calcium citrate malate (CCM). J Am Coll Nutr 1996;15:313-6.

Binkley N et al. Low vitamin D status despite abundant sun exposure. J clin Endocrinol Metab 2007;92:2130-2135.

Brannon PM ET AL. Overview of the conference vitamin D and health in the 21st century: An update. Am J Clin Nutr 2008;88(suppl):483S-490S. Colorado State University Extension: A Guide to Daily Food Choices, accessed June 12, 2010.

Colorado State University Extension: A Guide to Daily Food Choices, accessed June 12, 2010.

Committee to Review Dietary Reference Intakes for Vitamin D and Calcium, Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Calcium and Vitamin D. Washington, DC: National Academy Press, 2010

Cunningham-Rundles S. Mechanisms of nutrient modulation of the immune response. J Allergy Clin Immunol. 2005 Jun;115(6):1119-1128.

Dean C. The Magnesium Miracle. Ballentine Publishers. 2007

de Gruijl FR. Sufficient vitamin D from casual sun exposure? Photochem Photobiol. 2011 May-Jun;87(3):598-601. Epub 2011 Apr 6.

De Burca N. Anterior thigh pain – A case report. Manual Therapy. 2010;16(2011):291-295.

Diffey BLBr J Nutr. Modeling vitamin D status due to oral intake and sun exposure in an adult British population.

2013 Jan 23:1-9. [Epub ahead of print].

Edgelow, Peter. "Neurovascular Consequences of Cumulative Trauma Disorders Affecting the Thoracic Outlet: A Patient-Centered Treatment Approach." Physical Therapy of The Shoulder 4th edition by R. Donatelli. 205-238. Book Chapter.

Ellis RF, Hing WA. Neural mobilization: a systematic review of randomized controlled trials with an analysis of therapeutic efficacy. J of Manual & Manip Ther. 2008;16:8-22.

Federal Trade Commission: Miracle" Health Claims: Add a Dose of Skepticism,

www.ftc.gov/bcp/edu/pubs/consumer/health/hea07.shtm

Felsby S et al. NMDA receptor blockade in chronic neuropathic pain: a comparison of ketamine and magnesium chloride. Pain. 1995;64:283-291.

Fine KD et al. Intestinal absorption of magnesium from food and supplements. J Clin Invest. 1991 August; 88(2): 396–402.

Fioravanti A et al. Short- and long-term effects of mud-bath treatment on hand osteoarthritis: a randomized clinical trial. Int J Biometeorol. 2013;Jan (1):

Food and Drug Administration: Overview of Dietary Supplements,

www.fda.gov/Food/DietarySupplements/ConsumerInformation/ucm110417.htm

Glover TL et al. A Cross-sectional Examination of Vitamin D, Obesity, and Measures of Pain and Function in Middle-aged and Older Adults With Knee Osteoarthritis. Clin J Pain. 2015 Dec;31(12):1060-7

Haas EM. Staying Healthy with Nutrition, rev: The Complete Guide to Diet and Nutritional Medicine [Paperback]. 2006 Random House Publishers.

Krebs NF: Overview of zinc absorption and excretion in the human gastrointestinal tract. J Nutrition 2000;130:1374S-1377S.

Kuanal RC, Nemere I: Regulation of intestinal calcium transport. Annu Rev Nutr 2008;28:179-196.

Lindberg JS et al. Magnesium bioavailability from magnesium citrate and magnesium oxide. J Am Coll Nutr. 1990;9(1):48-55.

Lonnerdal B: Dietary factors influencing zinc absorption. J Nutrition 2000;130:1378S-1385S.

Lucas RM, Ponsonby AL. Considering the potential benefits as well as adverse effects of sun exposure: can all the potential benefits be provided by oral vitamin D supplementation? Prog Biophys Mol Biol. 2006 Sep;92(1):140-9. Epub 2006 Feb 28

Martens J et al. Microbial production of vitamin B12. Appl Microbiol Biotechnol. 2002;58:275-285.

Mateljan G. World's Healthiest Foods: Essential Guide for the Healthiest way of Eating. Canada. 2007 Mateljan G: WHFoods: http://www.whfoods.com/

Morowitz MJ et al. Contributions of Intestinal Bacteria to Nutrition and Metabolism in the Critically III. Surg Clin North Am. 2011 August; 91(4): 771–785.

Nielsen FH. Magnesium, inflammation, and obesity in chronic disease. Nutr Rev. 2010 Jun;68(6):333-40.

Nordin BEC. Evolution of the Calcium Paradigm: The Relation between Vitamin D, Serum Calcium and Calcium Absorption.

Nutrients. 2010 September; 2(9): 997-1004.

Office of Dietary Supplements. Overview of Dietary Supplements. What Dietary Supplements Are You Taking? http://ods.od.nih.gov/pubs/partnersbrochure.asp

Office of Dietary Supplements. Zinc Dietary Supplement Fact Sheet http://

ods.od.nih.gov/factsheets/Zinc-HealthProfessional

Office of Dietary Supplements. What Dietary Supplements Are You Taking?

http://ods.od.nih.gov/pubs/partnersbrochure.asp

Palmer S. Sorting Out the Science on Multivitamins and Minerals. Today's Dietitian. 2009 August;11(8):38.

Rosanoff A, Weaver CM, Rude RK Suboptimal magnesium status in the United States: are the health consequences underestimated? Nutr Rev. 2012 Mar;70(3):153-64.

Rosanoff A, Seelig MS. Comparison of mechanism and functional effects of magnesium and statin pharmaceutucals. J Am C Nutrition. 2004;23(5):501S-505S.

Seelig MS. The Magnesium Factor. Avery Publishing Group. 2003

Seelig MS. Consequences of magnesium deficiency on the enhancement of stress reactions; prevention and therapeutic implications (a review). J Am Coll Nutr Oct 1994;13(5):429-446.

Sesso HD et al. Vitamins E and C in the prevention of cardiovascular disease in men: the Physicians' Health Study II randomized controlled trial JAMA. 300(18): 2123-33, 2008 Nov 12.

Song Y, Li TY, et al. Magnesium intake and plasma concentrations of markers of systemic inflammation and endothelial dysfunction in women. Am J Clin Nutr. 2007 Apr;85(4):1068-74.

Tam M et al. Possible role of magnesium on the immune system. Eur J Clin Nutri 2003;57: 1193-1197. Waring RH. George Eby Research Institute; Report on Absorption of Magnesium Sulfate (Epsom Salts) Across the Skin; R.H. Waring; 2004

Weglicki WB et al. Magnesium-deficiency elevates circulating levels of inflammatory cytokines and endothelin. Mol Cell Biochem 1992;110:169–73.

Woolf CJ, Thompson WN. The induction and maintenance of central sensitization is dependent on N-methyl-D-aspartic acid receptor activation: implications for a treatment of post-injury pain hypersensitivity states. Pain 1991;44:298-299.

NEURAL DURAL

Allen RJ et al. Pressure desensitization effects on pressure tolerance and function in patients with complex regional pain syndrome. Orthop Pract. 2004;16:13-16.

Barr, A.E. Tissue pathophysiology, neuroplasticity and motor behavioral changes in painful repetitive motion injuries. Man Ther. 2006; 11: 173 – 174.

Beltran-Alacreu H et al. Comparison of Hypoalgesic Effects of Neural Stretching vs Neural Gliding: A Randomized Controlled Trial. J Manipulative Physiol Ther. 2015 Oct 16

Beneciuk J, Viti J, Baldwin T. The use of passive slump stretching as an intervention in the treatment of a patient with signs and symptoms consistent with adverse neural tension: a case report. AAOMPT Conference, 2006.

Boyd BS, Wanek L, Gray AT, Topp KS. Mechanosensitivy of the lower extremity nervous system during straight-leg raise neurodynamic testing in healthy individuals. JOSPT. 2009; 39(11): 780-790.

Butler DS. The Sensitive Nervous System. Adelaide, Australia: Noigroup Publications, 2000.

Catalano M, Nordstrom T. Physical therapy interventions to improve lumbar spine range of motion and neurodynamics in a patient with bilateral calf pain. Kaiser Permanente Medical Center.

Cleland, J., Hunt G., & Palmer, J. "Effectiveness of Neural Mobilization in the Treatment of a Patient with Lower extremity Neurogenic Pain: a Single-Case Design." J of Manual & Manip Ther. 2004;12:143-152

Efstathiou M. Effectiveness of neural mobilization in patients with spinal radiculopathy: a critical review. J Bodywork and Mvt Ther. 2015;19(2):205-212.

Ellis RF, Hing WA. Neural Mobilization: a systematic Review of Randomized Controlled Trials with an analysis of therapeutic efficacy. J Man Manip Ther. 2008;16(1):8-22.

Gjerstad J. Genetic susceptibility and development of chronic non-malignant back pain. Rev Neurosci. 2007;18:83–91.

Glick DB. The autonomic nervous system. In: Miller RD, editor. Miller's Anesthesia. New York, NY, USA: Elsevier; 2009. pp. 261–304.

Goodman C. Differential Diagnosis In Physical Therapy. 3rd ed. Elsevier Saunders. 2000

Herrington L. (abstracted by Kerry Gilbert in IAOM-US Quarterly Review 2006 (4th Quarter); vol. 56:2-

3.). Effect of different neurodynamic mobilization techniques on knee range of motion in the slump position. J Man & Manip Ther. 2006;14:101-107.

Johnson RD, Courtney CA. Identification of potential factors suggesting double crush phenomenon: two case reports. AAOMPT Conference, 2006.

Kargapol'tseva GV. The strength and elasticity of the dura mater. Vopr Neirokhir. 1975 Jan-Feb;(1):53-

Klingman RE. The pseudoradicular syndrome: a case report implicating double crush mechanisms in peripheral nerve tissue of the lower extremity. J Manual and Manip Ther. 1999;7:81-91.

Koike H. The extensibility of Aplysia nerve and the determination of true axon length. J Physiol. 1987 Sep;390:469-87

Patin DJ, Eckstein EC et al. Anatomic and biomechanical properties of human lumbar dura mater. Anesth Analg 1993 Mar;76(3):535-40

Reisch, R., Williams, K., Nee, R., Rutt, R. ULNT2 – Median Nerve Bias: Examiner Reliability and Sensory responses in Asymptomatic Subjects. J of Manual & ManipTher. 2005;13: 44-55.

Robert, R et al. "Pudendal NerveEntrapment." Surg Radiol Antat. Vol.20; Dec.1998: 93-98.

Rode F et al. The importance of genetic background on pain behaviors and pharmacological sensitivity in the rat spared serve injury model of peripheral neuropathic pain. Eur J Pharmacol. 2007;564:103–111.

Runza M, Pietrabissa R et al. Lumbar dura mater biomechanics: experimental characterization and scanning electron microscopy observations. Anesth Analg. 1999 Jun;88(6):1317-21.

Seror P (abstracted by Robert Moss in IAOM-US Quarterly Review 2006 (4th Quarter); vol. 56:2-3.). Symptoms of thoracic outlet syndrome in women with carpal tunnel syndrome. Clin Neurophysiol. 2005;116:2324-2329.

Talebi GA et al. Treatment of chronic radiculopathy of the first sacral nerve root using neuromobilization techniques: A case study. Journal of Back and Musculoskeletal Rehabilitation. 2010;23(3):151-159.

Tambekar N et al. Effect of Butler's neural tissue mobilization and Mulligan's bent leg raise on pain and straight leg raise in patients of low back ache. http://dx.doi.org/10.1016/j.jbmt.2015.08.003
Topp KS, Boyd BS. Structure and biomechanics of peripheral nerves: nerve responses to physical stresses and implications for physical therapist practice. Phys Ther. 2006;86:92-108.

Van der Heide B et al. (abstracted by Kerry Gilbert in IAOM-US Quarterly Review 2006 (4th Quarter); vol. 56:2-3.). Test-retest reliability and face validity of a modified neural tissue provocation test in patients with cervicobrachial pain syndrome. J Manual Manip Ther. 2006;14:30-36.

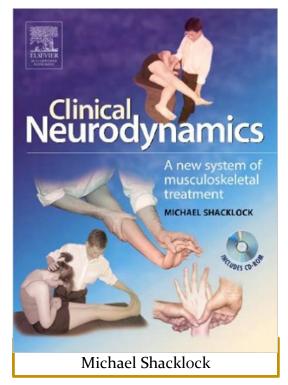
Walsh J, Flatley M, Johnston N, Bennett K. Slump test: sensory responses in asymptomatic subjects. J Man and

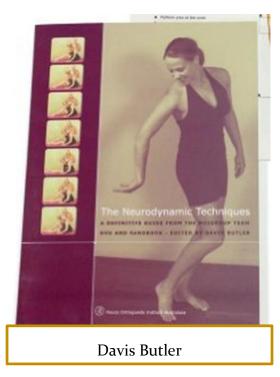
Manip Ther, 2007; 15: 231-238.

Walsh J, Hall T. Reliability, validity and diagnostic accuracy of palpation of the sciatic, tibial and common peroneal nerves in the examination of low back related leg pain. Manual Therapy. 2009;14: 623-629.

Zarzur E. Mechanical properties of the human lumbar dura mater. Arq Neuropsiquiatr 1996 Sep;54(3):455-60.

SUGGESTED READINGS:





FASCIA

Al Dajah SB. Soft Tissue Mobilization and PNF Improve Range of Motion and Minimize Pain Level in Shoulder Impingement. J Phys Ther Sci. 2014 Nov;26(11):1803-5.

Chaitow, L. ed. Fascial Dysfunctions. Manual Therapy Approaches. HandSpring Publishing.

Chaudhry H e al. Three-dimensional mathematical model for deformation of human fasciae in manual therapy. JAOA. 2008 Aug. 108(8): 379-390.

CHAUDHRY, H. et al. Viscoelastic behavior of human fascia under extension in manual therapy. 2007a J Bodyw Mov Ther. 11(2): 159-167.

CHAUDHRY, H. et al. Mathematical analysis of applied loads on skeletal muscles during manual therapy. 2007b J Am Osteo As. 108(12): 680-688.

CHAUDHRY, H. et al, Evaluation of the rotational stiffness and viscoelastic properties of the low back and improving the low back viscoelasticity. 2011. Int J Exp Computational Biomechanics Vol 1(4): 417.

Day JA et al. From clinical experience to a model for the human fascial system. J Bodywork Mvt Ther. 2012 16:372-380.

Editorial. Selected reflections of the third fascia Research Conference (FRC3), Vancouver BC, March 2012. J Bodywork Mvt Ther. 2012 (16): 271-274

Findley T. Fascia research- A narrative review. J Bodywork Mvt Ther. 2012 (16): 67-75

FINDLEY, T., et al. Fascial Research Congress Evidence from the 100 year perspective on Andrew Taylor Still. 2013. J Bodyw Mov Ther. 17: 356-364.

Imai K et al. Biomechanical and histological effects of augmented soft tissue mobilization therapy on achilles tendinopathy in a rabbit model. J Manipulative Physiol Ther. 2015 Feb;38(2):112-8.

Johnson G. "Orthopaedic Physical Therapy (3rd Edition)". Robert Donatelli and Michael Wooden (eds.), Churchill Livingstone, 2001: "Soft Tissue Mobilization"

Kjaer M et al. Extracellular matrix adaptation of tendon and skeletal muscle to exercise. J Anat. 2006 Apr;208(4):445-450.

KANLAYANAPHOTPORN, R., Changes in sitting posture affect shoulder range of motion.. 2014 J Bodyw Mov Ther.

LANGEVIN, H. et al., Ultrasound evidence of altered lumbar connective tissue structure in human subjects with chronic LBP. 2009. BMC Musculoskeletal Disorders. 10:151-160.

Myers T. Anatomy Trains (2 edition). Churchill Livingstone. 2009

Robertson, S. Integrating the fascial system into contemporary concepts on movement. The Journal of Manual and Manipulative Therapy. 2001; 9(1): 40-47.

Schleip R. Active fascial contractility: Fascia may be able to contract in a smooth muscle-like manner and thereby influence musculoskeletal dynamics. Med Hypotheses. 2005;65:273-277.

Schleip R. Training principles for fascial connective tissues: Scientific foundation and suggested practical applications. J Bodywork Mvt Ther. 2012 (16): 1-13

Schliep R et al. Strain hardening of fascia: Static stretching of dense fibrous connective tissue can induce a temporary stiffness increase accompanied by enhanced matrix hydration. Journal of Bodywork and Movement Therapies. 2012; 16(1): 94-100

Simmonds N. A theoretical framework for the role of fascia in manual therapy. J Bodywork Mvt Ther. 2012 (16): 83-93

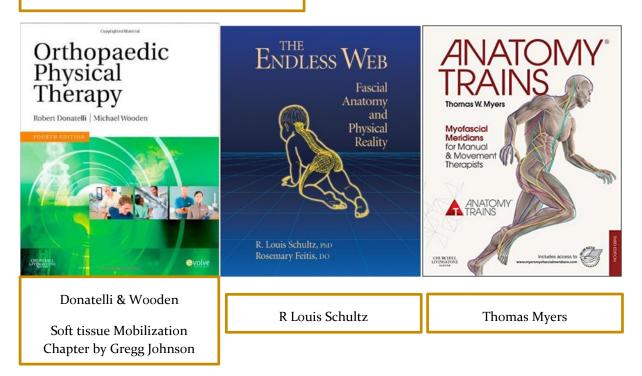
Stecco C et al. Histological characteristics of the deep fascia of the upper limb. Ital J Anat Embryol. 2006 Apr-Jun;111(2):105-110.

Winslow J. Treatment of lateral knee pain using soft tissue mobilization in four female triathletes. Int J Ther Massage Bodywork. 2014 Sep 3;7(3):25-31.

Yen-Hua Chen Increased Sliding of Transverse Abdominis during Contraction after Myofascial Release in Patients with Chronic Low Back Pain

Yuan S. Effectiveness of different styles of massage therapy in fibromyalgia: A systematic review and meta-analysis. Manual Therapy 2015 (20): 257-264

RECOMMENDED READINGS



COCCYX

Bo K, Lilleas F, Talseth T, Hedland H. Dynamic MRI of the pelvic floor muscles in an upright sitting position. Neurourol Urodyn 2001;20(2):167-74

Bogduk N. Clinical Anatomy of the Lumbar Spine and Sacrum. 4th ed. Elsevier Health Sciences. 2005. Cholewicki J, Juluru K, McGill SM. Intra-abdominal pressure mechanism for stabilizing the lumbar spine. J Biomech. 1999 Jan;32(1):13-7.

Emerson SS . Manipulation of the coccyx with anesthesia for the management of coccydynia. J Am Osteopath Assoc. 2012 Dec;112(12):805-7.

Gaddam SS et al. Gross and microscopic study of the filum terminale: does the filum contain functional neural elements. J Neurosurg Pediatr. 2012 9(1): 86-92.

Hodges PW, Butler JE, McKenzie DK, Gandevia SC. Contraction of the human diaphragm during rapid postural adjustments. J Physiol. 1997 Dec 1;505 (Pt 2):539-48

Jang HS. The filum terminale revisited: A histological study in human fetuses. Pediatr Neurosurg. 2015 Jarvis C. Physical Examination and Health Assessment. 5th ed. Elsevier Saunders. 2008

Jean-Yves M, Chatellier G. Comparison of three manual coccydynia treatments: a pilot study. Spine. 2001;26(20):479-484.

Jemmett RS, Macdonald DA, Agur AM. Anatomical relationships between selected segmental muscles of the lumbar spine in the context of multi-planar segmental motion: a preliminary investigation. Man Ther. 2004 Nov;9(4):203-10

Kemper C, Kemper K. "Fractured" or "Dislocated" Tailbone. Tailbone Pain 911

Lee, Diane. The Pelvic Girdle. Churchill Livingston 2004

Lee JY et al. An Anatomical and Morphometric Study of the Coccyx Using Three-Dimensional Reconstruction. 2015 Anat Rec (Hoboken)

Maigne JY, Guedj S, Straus C 1994 Idiopathic Coccygodynia: Lateral Roentgenograms in the Sitting Position and Coccygeal Discography. Spine 19: 930-934

Maigne, Jean-Yves. Management of Common Coccygodynia. Spine. 2000; 25(23):3072-3079

Maigne JY, Chatellier G. Comparison of three manual coccydynia treatments. Spine. 2001;26(20);

Maigne JY, Doursounian L, Chatellier G. Causes and Mechanisms of Common Coccydynia. Spine;25(23):3072-3079.

Maigne JY et al. The treatment of chronic coccydnia with intrarectal manipulation: a RCT. Spine, 2006 Aug; 31(18):E621-7

Mantia R et al. Shortness of filum terminale represents an anatomical specific feature in fibromyalgia: a nuclear magnetic resonance and clinical study. Muscles Ligaments tendons J 2015; 27:5(1): 33-37.

Pel J, Spoor C et al. Biomechanical Analysis of Reducing Sacroiliac Joint Shear Load by Optimization of Pelvic Muscle and Ligament Forces: Ann Biomed Eng. 2008 March; 36(3): 415–424.

Postacchini F, Massobrio M. Idiopathic coccygodynia. Analysis of fifty-one operative cases and a radiographic study of the normal coccyx. The Journal of bone and joint surgery. American volume.1983 Oct; 65(8): 1116-1124

Thompson EM et al. Clinical significance of imaging and histological characteristics of filum terminale in tethered cord syndrome. J Neurosurg Pediatr. 2014 13(3): 255-259.

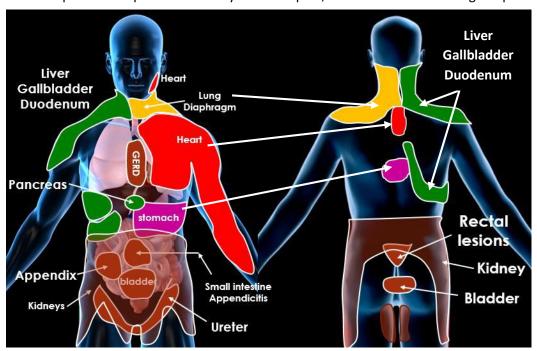
Tubbs R et al. The filum terminale externum. J Neurosurg: Spine. 2005; 3:149-152

Whittaker J. Abdominal ultrasound imaging of pelvic floor muscle function in individuals with low back pain. J Manual and Manip Ther. 2004;12:44-49.

Woon JT, Stringer MD. Clinical anatomy of the coccyx: A systematic review. Clin Anat. 2012 Mar;25(2):158-67.

Understand the SYSTEMS That are BUILT to MOVE and can SUSTAINED PAIN: VISCERA

- 1. Without ORGAN mobility, your trunk would lose its ability to twist and bend
- 2. Functional joints for your organs only exist because of the lubricating properties of fascia
 - a. Organs are coated with fascia
 - b. Organs can glide and slide on every other structure
 - c. Organs have FUNCTIONAL JOINTS and that allows our trunk to move
 - d. Freedom to move helps keep viscera efficient
- 3. Organs and their fascia lose mobility due to:
 - a. Direct trauma:
 - seat belt *sports *falls *surgery *pregnancy *N&V
 - b. Indirect trauma:
 - i. shock waves *pulling a muscle *TENSIONS fascial system
 - c. Inflammation:
 - i. Allergies *food poisoning *GI virus *bacteria *endometriosis pelvic *inflammatory disease *urinary tract infection *organ disease *medications
 - d. Muscle tension from stress or fear:
 - i. common emotion site
 - e. Inflamed nerves, muscles or joints NEAR an organ
 - f. Organ problems:
 - i. acid reflux *constipation *diarrhea *hiatal hernia *liver disease *bladder infection,
 *swollen prostate *endometriosis *gall bladder disease
 - g. Constant compression
 - i. Garments *posture
- 4. Viscera has predictable places it causes you to feel pain, without that area having the problem





REFERRED PAIN

Berger RA. Hand Surgery. Lippincott Williams & Wilkins. (2004)

Bradshaw C et al. Obturator nerve entrapment. A cause of groin pain in athletes. Am J Sports Med. 1997;25(3):402-408.

Chen Q et al. "Identification and quantification of myofascial taut bands with magnetic resonance elastography". Archives of Physical Medicine and Rehabilitation 2007: 88 (12): 1658–61

Chien AJ et al. Sonography and MR imaging of posterior interosseous nerve syndrome with surgical correlation. AJR Am J Roentgenol. 2003;181 (1): 219-21.

Cranford CS et al. Carpal tunnel syndrome. J Am Acad Orthop Surg. 2007;15(9):537–548.

Dang A et al. Unusual compression neuropathies of the forearm, part II: median nerve. J Hand Surg Am. 2009;34 (10): 1915-20

Dong Q et-al. Entrapment neuropathies in the upper and lower limbs: anatomy and MRI features. Radiol Res Pract. 17;2012:

Dutton M. Orthopaedic Examination, Evaluation, and Intervention. 2 ed: McGraw-Hill, Medical Publishing Division; 2008

Elhassan B, Steinmann SP. Entrapment neuropathy of the ulnar nerve. J Am Acad Orthop Surg. 2007;15(11):672–681

Ferdinand BD et al. MR imaging features of radial tunnel syndrome: initial experience. Radiology. 2006;240 (1): 161-8.

Gupta R, Rummler L, Steward O. Understanding the biology of compressive neuropathies. Clin Orthop Relat Res. 2005;(436):251–260.

Harnsberger HR et-al. Diagnostic and Surgical Imaging Anatomy. Lippincott Williams & Wilkins. (2006)

Kapandji IA. The Physiology of the Joints, volume III 6th Edition Churchill Livingstone; 6 edition. 2008

Labat JJ et al. Diagnostic criteria for pudendal neuralgia by pudendal nerve entrapment (Nantes criteria). Neurourol Urodyn. 2008;27(4):306-310.

McCrory P, Bell S. Nerve entrapment syndromes as a cause of pain in the hip, groin and buttock. Sports Med. 1999;27(4):261-274.

McCrory P et al. Nerve entrapments of the lower leg, ankle and foot in sport. 2002 Sports Med32(6): 371-91

Miller M. Review of Orthopaedics. Philadelphia, Pa.: Saunders; 2004.

Miller TT, Reinus WR. Nerve entrapment syndromes of the elbow, forearm, and wrist. AJR Am J Roentgenol. 2010;195 (3): 585-94

NEAL S et al. Peripheral Nerve Entrapment and Injury in the Upper Extremity Am Fam Physician. 2010 Jan 15;81(2):147-155.

Netter FH, Colacino S. Atlas of Human Anatomy. Summit, N.J.: CIBAGEIGY Corp; 1989.

Rassner L. Lumbar plexus nerve entrapment syndromes as a cause of groin pain in athletes. Curr Sports Med Rep. 2011;10(2):115-120.

Ritts GD et al. Radial tunnel syndrome. A ten-year surgical experience. Clin. Orthop. Relat. Res. 1987;(219): 201-5

Robinson DR. Pyriformis syndrome in relation to sciatic pain. Am J Surg. 1947;73(3):355-358. Shah JP et al. Biochemicals associated with pain and inflammation are elevated in sites near to and remote from active myofascial trigger points". Archives of Physical Medicine and Rehabilitation 2008: 89 (1): 16–23.

Snell RS. Clinical Anatomy for Medical Students. 4th ed. Boston, Mass.: Little, Brown; 1992. Stoller DW. Magnetic Resonance Imaging in Orthopaedics and Sports Medicine. 3rd ed. Philadelphia, Pa.: Lippincott Williams & Wilkins; 2007.

Tsai P, Steinberg DR. Median and radial nerve compression about the elbow. J Bone Joint Surg Am. 2008;90(2):420–428.

Toussaint CP, Zager EL. What's new in common upper extremity entrapment neuropathiesNeurosurg Clin N Am. 2008;19(4):573–581

Weiss LD et al. Oxford American Handbook of Physical Medicine and Rehabilitation. Oxford Univ Pr. (2010)

Wong C et al. A New Look at Trigger Point Injections. Research and Practice Volume. Hindawi Publishing Corporation Anesthesiology 2012

POSTURE

Amick BC et al. The effect of an office ergonomics intervention on reducing musculoskeletal symptoms. Spine. 2003;28(24):2706-2711.

Arokoski JP et al. Normal and pathological adaptations of articular cartilage to joint loading. Scand J Med Sci Sports. 2000 Aug;10(4):186-198.

Boissonnault, W., Bass, B. "Pathological Origins of Trunk and Neck Pain: Part I—Pelvic and Abdominal Visceral Disorders." JOSPT. 1990;12:192-207.

Boissonnault, W., Bass, B. "Pathological Origins of Trunk and Neck Pain: Part II—Disorders of the Cardiovascular and Pulmonary Systems." JOSPT. 1990;12:208-214.

Chaitow, L. ed. Fascial Dysfunctions. Manual Therapy Approaches. HandSpring Publishing.

Dankaerts W et al. Differences in sitting postures are associated with non-specific chronic low back pain disorders when subclassed. Spine. 2006b; 31:698-704

Dolan K, Green A. Lumbar Spine Reposition Sense: The effect of a "slouched" posture.

2006 Manual Therapy

Han JT, Lee JH, Yoon CH. The mechanical effect of kinesiology tape on rounded shoulder posture in seated male workers: a single-blinded randomized controlled pilot study. Physiother Theory Pract. 2015 Feb;31(2):120-5.

Hodges PW, Butler JE, McKenzie DK, Gandevia SC. Contraction of the human diaphragm during rapid postural adjustments. J Physiol. 1997 Dec 1;505 (Pt 2):539-48

Jarvis C. Physical Examination and Health Assessment. 5th ed. Elsevier Saunders. 2008

MacDonald D et al. Why do some patients keep hurting their back? Evidence of ongoing back muscle dysfunction during remission from recurrent back pain. Pain. 2009 Apr;142(3):183-188.

Marras WS, Ferguson S. Loading Along the Lumbar Spine as Influenced by Speed, Control, Load Magnitude, and Handle Height During Pushing. Clinical Biomechanics. February 2009; 24 (2) pp 155-163.

Moustafa I et al. The Effect of Adding Forward Head Posture Corrective Exercises in the Management of Lumbosacral Radiculopathy: A Randomized Controlled Study. J Manipulative Physiol Ther. 2015 (Feb 19)

Myers T. Anatomy Trains. 3rd ed. Churchhill Livingston. 2014

O'Sullivan K et al. Neutral lumbar spine sitting posture in pain-free subjects. 2010;15:557-561

O'Sullivan P et al. The Relationship Between Posture and Back Muscle Endurance in Industrial Workers with Flexion-Related Low Back Pain. Manual Therapy. 2006; Vol. 11: pp 264-271

Parkinson R, Callaghan JP. The Role of Dynamic Flexion in Spine Injury is Altered by Increasing Dynamic Load Magnitude. Clinical Biomechanics. February 2009; 24(2) pp. 148-154.

Reeve and Dilley. Effects of Posture on the thickness of the transverse abdominis in pain free subjects. Manual Therapy 2009: 12

Shaghayeghn F. Evaluation of forward head posture in sitting and standing positions. Eur Spine J. 2015

Stecco C. Functional Atlas of the Human Fascial System. Churchhill Livingston. 2015

Stevens V, Vleeming A et al. Electromyographic activity of trunk and hip muscles during stabilization exercises in four-point kneeling in healthy volunteers. Eur Spine J. 2007 May; 16(5): 711–718.

Yahia A et al. Evaluation of the posture and muscular strength of the trunk and inferior members of patients with chronic lumbar pain. Joint Bone Spine. 2011;78:291-297.