

References

- Abe, I., Haranda, Y., Oinuma, K., et al., 2000. Acetabular labrum: abnormal findings at MR imaging in asymptomatic hips. *Radiology* 216 (2), 576.
- Abitbol, M.M., 1995. Energy storage in the vertebral column. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C. (Eds.), *Second interdisciplinary world congress on low back pain: the integrated function of the lumbar spine and sacroiliac joint, Part 1*. San Diego, California, p. 257.
- Abitbol, M.M., 1997. Quadrupedalism, bipedalism, and human pregnancy. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), *Movement, stability and low back pain*. Churchill Livingstone, Edinburgh, p. 395.
- Abrams, P., Cardozo, L., Fall, M., et al., 2002. The standardization of terminology of lower urinary tract function: report from the standardization sub-committee of the International Continence Society. *Neurourol. Urodyn.* 21, 167.
- Acland, R.D., 2004. Acland's DVD atlas of human anatomy. DVD 3: The trunk. Lippincott Williams & Wilkins, Baltimore.
- Adams, J.C., 1973. *Outline of orthopaedics*, seventh ed. Churchill Livingstone, Edinburgh.
- Adams, M.A., McMillan, D.W., Green, T.P., et al., 1996. Sustained loading generates stress concentrations in lumbar intervertebral discs. *Spine* 21, 434.
- Albee, F.H., 1909. A study of the anatomy and the clinical importance of the sacroiliac joint. *J. Am. Med. Assoc.* 53, 1273.
- Albert, H., Godskesen, M., Westergaard, J., 2000. Evaluation of clinical tests used in classification procedures in pregnancy-related pelvic joint pain. *Eur. Spine J* 9, 161.
- Albert, H.B., Godskesen, M., Westergaard, J.G., 2002. Incidence of four syndromes of pregnancy-related pelvic joint pain. *Spine* 27, 2831.
- Allen, R.E., Hosker, G.L., Smith, A.R.B., Warrell, D.W., 1990. Pelvic floor damage and childbirth: a neurophysiological study. *Br. J. Obstet. Gynaecol.* 97, 770.
- Anda, S., Svenningsen, S., Dale, L.G., et al., 1986. The acetabular sector angle of the adult hip determined by computed tomography. *Acta Radiol. Diagn.* 27 (4), 443.
- Andersson, E.A., Grundstrom, H., Thorstensson, A., 2002. Diverging intramuscular activity patterns in back and abdominal muscles during trunk rotation. *Spine* 27 (6), E152.
- Andersson, E., Oddsson, L., Grundstrom, H., et al., 1995. The role of the psoas and iliacus muscles for stability and movement of the lumbar spine, pelvis and hip. *Scand. J. Med. Sci. Sports* 5 (1), 10.
- Arab, M.A., Abdollahi, I., Joghataei, M.T., et al., 2009. A Inter- and intra-examiner reliability of single and composites of selected motion palpation and pain provocation tests for sacroiliac joint. *Man. Ther.* 14, 213.
- Arendt-Nielsen, L., Graven-Nielsen, T., Sværre, H., et al., 1996. The influence of low back pain on muscle activity and coordination during gait: a clinical and experimental study. *Pain* 64 (2), 231.
- Aruin, A.S., Latash, M.L., 1995. Directional specificity of postural muscles in feed-forward postural reactions during fast voluntary arm movements. *Exp. Brain Res.* 103 (2), 323.
- Ashton-Miller, J.A., DeLancey, J.O.L., 2007. Functional anatomy of the female pelvic floor. *Ann. N. Y. Acad. Sci.* 1101, 266.
- Ashton-Miller, J.A., DeLancey, J.O.L., 2009. On the biomechanics of vaginal birth and common sequelae. *Annu. Rev. Biomed. Eng.* 11, 163.
- Ashton-Miller, J.A., Howard, D., DeLancey, J.O.L., 2001. The functional anatomy of the female pelvic floor and stress continence control system. *Scand. J. Urol. Nephrol. Suppl.* 207, 1-7.
- Askar, O.M., 1977. Surgical anatomy of the aponeurotic expansions of the anterior abdominal wall. *Ann. R. Coll. Surg. Engl.* 59, 313.
- Assendelft, W.J., Morton, S.C., Yu, E.I., et al., 2003. Spinal manipulative therapy for low back pain: a meta-analysis of effectiveness relative to other therapies. *Ann. Intern. Med.* 138, 871-881.
- Austin, A.B., Souza, R.B., Meyer, J.L., et al., 2008. Identification of abnormal hip motion associated with acetabular labral pathology.

- J. Orthop. Sports Phys. Ther. 38 (9), 558.
- Axer, H., von Keyserlingk, D.G., Prescher, A., 2000. Collagen fibers in linea alba and rectus sheaths. II. Variability and biomechanical aspects. *J. Surg. Res.* 96, 239.
- Axer, H., von Keyserlingk, D.G., Prescher, A., 2001. Collagen fibers in linea alba and rectus sheaths. I. General scheme and morphological aspects. *J. Surg. Res.* 96, 127-134.
- Barbic, M., Kralj, B., Cor, A., 2003. Compliance of the bladder neck supporting structures: importance of activity pattern of levator ani muscle and content of elastic fibers of endopelvic fascia. *Neurourol. Urodyn.* 22, 269.
- Barker, P.J., 2005. Applied anatomy and biomechanics of the lumbar fascia: implications for segmental control. PhD thesis. University of Melbourne, Australia.
- Barker, P.J., Briggs, C.A., 1999. Attachments of the posterior layer of the lumbar fascia. *Spine* 24 (17), 1757.
- Barker, P.J., Briggs, C.A., 2007. Anatomy and biomechanics of the lumbar fasciae: implication for lumbopelvic control and clinical practice. In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain*, second ed. Elsevier, Edinburgh, p. 63.
- Barker, P.J., Briggs, C.A., Bogeski, G., 2004. Tensile transmission across the lumbar fasciae in unembalmed cadavers: effects of tension to various muscular attachments. *Spine* 29 (2), 129.
- Barker, P.J., Guggenheimer, K.T., Grkovic, I., et al., 2006. Effects of tensioning the lumbar fascia on segmental stiffness during flexion and extension. *Spine* 31 (4), 397.
- Barral, J.P., 1993. *Urogenital manipulation*. Eastland Press, Seattle.
- Basmajian, J.V., DeLuca, C.J., 1985. *Muscles alive: their functions revealed by electromyography*. Williams & Wilkins, Baltimore.
- Beales, D.J., O'Sullivan, P.B., Briffa, N.K., 2008. Motor control patterns during active straight leg raise in pain-free subjects. *Spine* 34 (1), E1.
- Beattie, P., Nelson, R., 2006. Clinical prediction rules: what are they and what do they tell us? *Aust. J. Physiother.* 52 (3), 157.
- Belenkii, V., Gurfinkel, V.S., Paltsev, Y., 1967. Elements of control of voluntary movements. *Biofizika* 12, 135.
- Bellamy, N., Park, W., Rooney, P.J., 1983. What do we know about the sacroiliac joint? *Semin. Arthritis Rheum.* 12, 282.
- Bergmark, A., 1989. Stability of the lumbar spine. A study in mechanical engineering. *Acta Orthop. Scand.* 230 (60), 20.
- Bernard, T.N., Kirkaldy-Willis, W.H., 1987. Recognizing specific characteristics of nonspecific low back pain. *Clin. Orthop.* 217, 266.
- Bø, K., 2003. Pelvic floor muscle strength and response to pelvic floor muscle training for stress urinary incontinence. *Neurourol. Urodyn.* 22, 654.
- Bø, K., Borgen, J.S., 2001. Prevalence of stress and urge urinary incontinence in elite athletes and controls. *Med. Sci. Sports Exerc.* 33 (11), 1797.
- Bø, K., Hagen, R.H., Dvarstein, B., et al., 1990. Pelvic floor muscle exercise for the treatment of female stress urinary incontinence: III Effects of two different degrees of pelvic floor muscle exercises. *Neurourol. Urodyn.* 9, 489.
- Bø, K., Lilleas, F., Talseth, T., 2001. Dynamic MRI of the pelvic floor muscles in an upright sitting position. *Neurourol. Urodyn.* 20, 167.
- Bø, K., Stein, R., 1994. Needle EMG registration of striated urethral wall and pelvic floor muscle activity patterns during cough, Valsalva, abdominal, hip adductor, and gluteal muscles contractions in nulliparous healthy females. *Neurourol. Urodyn.* 13, 35.
- Bogduk, N.L.T., 1983. The innervation of the lumbar spine. *Spine* 8, 286.
- Bogduk, N.L.T., 1997. *Clinical anatomy of the lumbar spine and sacrum*, third ed. Churchill Livingstone, New York.
- Bogduk, N., Percy, M., Hadfield, G., 1992. Anatomy and biomechanics of psoas major. *Clin. Biomech.* 7, 109-119.
- Boissonault, J.S., Blaschak, M.J., 1988. Incidence of diastasis recti abdominis during the childbearing year. *Phys. Ther.* 68 (7), 1082.
- Boissonault, W.G. (Ed.), 1995. *Examination in physical therapy practice: screening for medical disease*. Churchill Livingstone, New York.
- Bonica, J.J., 1953. *The management of pain*. Lea & Febiger, Philadelphia.
- Bouisset, S., Zattara, M., 1981. A sequence of postural adjustments precedes voluntary movement. *Neurosci. Lett.* 22, 263.
- Bowen, V., Cassidy, J.D., 1981. Macroscopic and microscopic anatomy of the sacroiliac joint from embryonic life until the eighth decade. *Spine* 6, 620.
- Boxer, S., Jones, S., 1997. Intra-rater reliability of rectus abdominis diastasis measurement using dial calipers. *Aust. J. Physiother.* 43 (2), 109.
- Bradlay, K.C., 1985. The posterior primary rami of segmental nerves. In: Glasgow, E.F., Twomey, L.T., Scull, E.R., Kleynhans, A.M. (Eds.), *Aspects of manipulative therapy*, second ed. Churchill Livingstone, Melbourne, p. 59.
- Brooke, R., 1924. The sacro-iliac joint. *J. Anat.* 58, 299.
- Brooke, R., 1930. The pelvic joints during and after parturition and pregnancy. *The Practitioner*, London, p. 307.
- Brown, S.H.M., McGill, S.M., 2009. Transmission of muscularly generated force and stiffness between layers of the rat abdominal wall. *Spine* 34 (2), E70.
- Brukner, P., Khan, K., 2007. *Clinical sports medicine*, second ed. McGraw-Hill, Sydney, Australia.
- Bump, R.C., Hurt, G.W., Fantl, J.A., et al., 1991. Assessment of Kegal pelvic muscle exercise performance after brief verbal instruction. *Am. J. Obstet. Gynecol.* 165, 322.
- Burnett, S., Della Roca, G., Prather, H., et al., 2006. Clinical presentation of patients with tears of the acetabular labrum. *J. Bone Joint Surg. Am.* 88 (7), 1448.
- Butler, D.S., 2000. *The sensitive nervous system*. NOI Group Publications, Adelaide, Australia.
- Butler, D.S., Moseley, G.L., 2003. *Explain pain*. NOI Group Publications, Adelaide, Australia.
- Buyruk, H.M., Guler-Uysal, F., Lotgering, F.K., 2002. The prognostic value of asymmetric laxity of the sacroiliac joints in pregnancy-related pelvic pain. *Spine* 27 (24), 2820.

- Buyruk, H.M., Snijders, C.J., Vleeming, A., et al., 1995b. The measurements of sacroiliac joint stiffness with colour Doppler imaging: a study on healthy subjects. *Eur. J. Radiol.* 21, 117.
- Buyruk, H.M., Stam, H.J., Snijders, C.J., et al., 1995a. The use of colour Doppler imaging for the assessment of sacroiliac joint stiffness: a study on embalmed human pelvises. *Eur. J. Radiol.* 21, 112.
- Buyruk, H.M., Stam, H.J., Snijders, C.J., 1999. Measurement of sacroiliac joint stiffness in peripartum pelvic pain patients with Doppler imaging of vibrations (DIV). *Eur. J. Obstet. Gynecol. Reprod. Biol.* 83 (2), 159.
- Cannon, W.B., Rosenblueth, A., 1949. The supersensitivity of denervated structures: a law of denervation. Macmillan, New York.
- Carey, T.S., Garrett, J.M., Jackman, A., Hadler, N., 1999. Recurrence and care seeking after acute back pain: results of a long-term follow-up study. *North Carolina Back Pain Project. Med. Care* 37 (2), 17.
- Carmichael, J.P., 1987. Inter- and intra-examiner reliability of palpation for sacroiliac joint dysfunction. *Journal of Manipulative Physical Therapy* 10 (4), 164.
- Chamberlain, W.E., 1930. The symphysis pubis in the Roentgen examination of the sacroiliac joint. *AJR. Am. J. Roentgenol.* 24, 621.
- Cholewicki, J., Crisco, J., Oxland, T.R., et al., 1996. Effect of posture and structure on three-dimensional coupled rotations in the lumbar spine. A biomechanical analysis. *Spine* 21 (21), 2421.
- Cholewicki, J., McGill, S.M., 1996. Mechanical stability of the in vivo lumbar spine: implications for injury and chronic low back pain. *Clin Biomech.* 11, 1-15.
- Cholewicki, J., McGill, S.M., Norman, R.W., 1991. Lumbar spine loading during the lifting of extremely heavy weights. *Med. Sci. Sports Exerc.* 23, 1179.
- Cholewicki, J., Panjabi, M.M., Khachatryan, A., 1997. Stabilizing function of trunk flexor-extensor muscles around a neutral spine posture. *Spine* 22 (19), 2207.
- Cholewicki, J., Van Vliet, J.J., 2002. Relative contribution of trunk muscles to the stability of the lumbar spine during isometric exertions. *Clin. Biomech. (Bristol, Avon)* 17, 99.
- Chow, D.H.K., Luk, D.K., Leong, J.C.Y., et al., 1989. Torsional stability of the lumbosacral junctions. Significance of the iliolumbar ligament. *Spine* 1989 (14), 611.
- Cleland, J.A., Noteboom, T.A., Whitman, J.M., et al., 2008. A primer on selected aspects of evidence-based practice relating to questions of treatment, Part 1: asking questions, finding evidence, and determining validity. *J. Orthop. Sports Phys. Ther.* 38 (8), 476.
- Cochrane, A.L., 1972. Effectiveness and efficiency. Random reflections on health services. Nuffield Provincial Hospitals Trust, London. Reprinted in 1989 in association with the BMJ, Reprinted in 1999 for Nuffield Trust by the Royal Society of Medicine Press, London (ISBN 1-85315-394-X).
- Colachis, S.C., Worden, R.E., Bechtol, C.O., et al., 1963. Movement of the sacroiliac joint in the adult male: a preliminary report. *Arch. Phys. Med. Rehabil.* 44, 490.
- Coldron, Y., Stokes, M.J., Newham, D.J., et al., 2008. Postpartum characteristics of rectus abdominis on ultrasound imaging. *Man. Ther.* 13, 112.
- Constantinou, C.E., Govan, D.E., 1982. Spatial distribution and timing of transmitted and reflexly generated urethral pressures in healthy women. *J. Urol.* 127, 964.
- Cook, C., 2008. Potential pitfalls of clinical prediction rules. *Journal of Manual and Manipulative Therapy* 16 (2), 69.
- Coste, J., Paolaggi, J.B., Spira, A., 1992. Classification of nonspecific low back pain, I: psychological involvement in low back pain. *Spine* 17, 1028.
- Cowan, S.M., Schache, A.G., Brukner, P., et al., 2004. Delayed onset of transversus abdominis in long-standing groin pain. *Med. Sci. Sports Exerc.* 36 (12), 2042.
- Cresswell, A., 1993. Responses of intra-abdominal pressure and abdominal muscle activity during dynamic loading in man. *Eur. J. Appl. Physiol.* 66, 315.
- Cresswell, A., Grundstrom, H., Thorstensson, A., 1992. Observations on intra-abdominal pressure and patterns of abdominal intra-muscular activity in man. *Acta Physiol. Scand.* 144, 409.
- Crisco, J.J., Panjabi, M.M., 1991. The intersegmental and multisegmental muscles of the lumbar spine: a biomechanical model comparing lateral stabilizing potential. *Spine* 16 (7), 793.
- Crisco, J.J., Panjabi, M.M., 1992. Euler stability of the human ligamentous lumbar spine. Part 1: theory. *Clin. Biomech.* 7, 19.
- Crisco, J.J., Panjabi, M.M., Yamamoto, I., Oxland, T.R., 1992. Euler stability of the human ligamentous lumbar spine: Part II experiment. *Clin. Biomech. (Bristol, Avon)* 7, 27.
- Crock, H.V., 1980. An atlas of the arterial supply of the head and neck of the femur in man. *Clin. Orthop. Relat. Res.* 152, 17.
- Cundiff, G.W., 2004. The pathophysiology of stress urinary incontinence: a historical perspective. *Rev. Urol.* 6 (Suppl 3), S10.
- Cundiff, G.W., Fenner, D., 2004. Evaluation and treatment of women with rectocele: focus on associated defecatory and sexual dysfunction. *Obstet. Gynecol.* 104 (6), 1403.
- Cusi, M., Saunders, J., Hungerford, B., et al., 2010. The use of prolotherapy in the sacroiliac joint. *Br. J. Sports Med.* 44 (2), 100.
- Cyriax, J., 1954. Textbook of orthopaedic medicine. Cassell, London.
- Damen, L., Buyruk, H.M., Guler-Uysal, F., 2001. Pelvic pain during pregnancy is associated with asymmetric laxity of the sacroiliac joints. *Acta Obstet. Gynecol. Scand.* 80, 1019.
- Damen, L., Mens, J.M.A., Snijders, C.J., 2002a. The mechanical effects of a pelvic belt in patients with pregnancy-related pelvic pain. PhD thesis, Erasmus University, Rotterdam, The Netherlands.
- Damen, L., Spoor, C.W., Snijders, C.J., 2002b. Does a pelvic belt influence sacroiliac joint laxity? *Clin. Biomech. (Bristol, Avon)* 17 (7), 495.
- Damen, L., Stijnen, T., Roebroek, M.E., et al., 2002c. Reliability of sacroiliac joint laxity measurement with Doppler imaging of vibrations. *Ultrasound Med. Biol.* 28, 407.

- Dangaria, T., Naesh, O., 1998. Changes in cross-sectional area of psoas major muscle in unilateral sciatic caused by disc herniation. *Spine* 23 (8), 928.
- Dankaerts, W., O'sullivan, P., Burnett, A., Straker, L., 2006. Difference in sitting postures are associated with nonspecific chronic low back pain disorders when patients are subclassified. *Spine* 31 (6), 698.
- Danneels, L.A., Vanderstraeten, G.G., Cambier, D.C., et al., 2000. Imaging of trunk muscles in chronic low back pain patients and healthy control subjects. *Eur. Spine J.* 9, 266.
- Dar, G., Khamis, S., Peleg, S., et al., 2008. Sacroiliac joint fusion and the implications for manual therapy diagnosis and treatment. *Man. Ther.* 13, 155.
- David, M., 2005. *The slow down diet: eating for pleasure, energy and weight loss.* Healing Arts Press, Vermont, USA.
- de Groot, M., Pool-Goudzwaard, A.L., Spoor, C.W., 2008. The active straight leg raising test (ASLR) in pregnant women: differences in muscle activity and force between patients and healthy subjects. *Man. Ther.* 13 (1), 68.
- Deindl, F.M., Vodusek, D.B., Hesse, U., et al., 1993. Activity patterns of pubococcygeal muscles in nulliparous continent women. *Br. J. Urol.* 72, 46.
- Deindl, F.M., Vodusek, D.B., Hesse, U., 1994. Pelvic floor activity patterns: comparison of nulliparous continent and parous urinary stress incontinent women. A kinesiological EMG study. *Br. J. Urol.* 73, 413.
- DeLancey, J.O.L., 1994. Structural support of the urethra as it relates to stress urinary incontinence: the hammock hypothesis. *Am. J. Obstet. Gynecol.* 170 (6), 1713.
- DeLancey, J.O.L., 2002. Fascial and muscular abnormalities in women with urethral hypermobility and anterior vaginal wall prolapse. *Am. J. Obstet. Gynecol.* 187 (1), 93.
- DeLancey, J.O.L., 2005. The hidden epidemic of pelvic floor dysfunction: achievable goals for improved prevention and treatment. *Am. J. Obstet. Gynecol.* 192, 1488.
- DeLancey, J.O.L., Kearney, Q., Chou, et al., 2003. The appearance of levator ani muscle abnormalities in magnetic resonance images after vaginal delivery. *Obstet. Gynecol.* 101 (1), 46.
- DeLancey, J.O.L., Morgan, D.M., Fenner, D.E., et al., 2007. Comparison of levator ani muscle defects and function in women with and without pelvic organ prolapse. *Obstet. Gynecol.* 109, 295.
- Delitto, A., Erhard, R.E., Bowling, R.W., 1995. A treatment-based classification approach to low back syndrome: identifying and staging patients for conservative treatment. *Phys. Ther.* 75, 470.
- DeRosa, C., 2001. Functional anatomy of the lumbar spine and sacroiliac joint. In: *Proceedings from the 4th Interdisciplinary World Congress on Low Back and Pelvic Pain*, Montreal, Canada.
- DeTroyer, A.D., 1989. The mechanism of the inspiratory expansion of the rib cage. *J. Lab. Clin. Med.* 114 (2), 97.
- Dietz, H.P., Clarke, B., 2005. Prevalence of rectocele in young nulliparous women. *Aust. N. Z. J. Obstet. Gynaecol.* 45 (5), 391.
- Dietz, H.P., Korda, A., 2005. Which bowel symptoms are most strongly associated with a true rectocele? *Aust. N. Z. J. Obstet. Gynaecol.* 45 (6), 505.
- Dietz, H.P., Lanzarone, V., 2005. Levator trauma after vaginal delivery. *Obstet. Gynecol.* 106 (4), 707.
- Dietz, H.P., Shek, C., 2007. Levator avulsion and grading of pelvic floor muscle strength. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* Nov 13 – epub ahead of print.
- Dietz, H.P., Shek, C., 2008. Validity and reproducibility of the digital detection of levator trauma. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 19 (8), 1097.
- Dietz, H.P., Simpson, J.M., 2007. Does delayed child-bearing increase the risk of levator injury in labour. *Aust. N. Z. J. Obstet. Gynaecol.* 47 (6), 491.
- Dietz, H.P., Steensma, 2005. Posterior compartment prolapse on two-dimension and three-dimensional pelvic floor ultrasound: the distinction between true rectocele, perineal hypermobility and enterocele. *Ultrasound Obstet. Gynecol.* 26, 73.
- Dietz, H.P., Steensma, A.B., 2006. The prevalence of major abnormalities of the levator ani in urogynaecological patients. *Br. J. Obstet. Gynaecol.* 113, 225.
- Dietz, H.P., Steensma, A.B., 2006. The role of childbirth in the aetiology of rectocele. *Br. J. Obstet. Gynaecol.* 113, 264.
- Dietz, H.P., Hyland, G., Hay-Smith, J., 2006. The assessment of levator trauma: a comparison between palpation and 4D pelvis floor ultrasound. *Neurourol. Urodyn.* 25, 424.
- Dijkstra, P.F., Vleeming, A., Stoeckart, R., 1989. Complex motion tomography of the sacroiliac joint. An anatomical and roentgenological study. *Rofo* 150 (6), 635.
- Doidge, N., 2007. *The brain that changes itself. Stories of personal triumph from the frontiers of brain science.* Penguin Books, New York.
- Dommerholt, J., Myoral del Moral, O., Gröbli, C., 2006. Trigger point dry needling. *Journal of Manual and Manipulative Therapy* 14 (4), E70.
- DonTigny, R.L., 1985. Function and pathomechanics of the sacroiliac joint: a review. *Phys. Ther.* 65, 35.
- DonTigny, R.L., 1990. Anterior dysfunction of the sacroiliac joint as a major factor in the etiology of idiopathic low back pain syndrome. *Phys. Ther.* 70, 250.
- DonTigny, R.L., 1997. Mechanics and treatment of the sacroiliac joint. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), *Movement, stability and low back pain.* Churchill Livingstone, Edinburgh, p. 461.
- Dorman, T., 1994. Failure of self bracing at the sacroiliac joint: the slipping clutch syndrome. *J. Orthop. Med.* 16, 49.
- Dorman, T., 1997. Pelvic mechanics and prolotherapy. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), *Movement, stability and low back pain.* Churchill Livingstone, Edinburgh, p. 501.
- Dreyfuss, P., Michaelsen, M., Pauza, D., McLarty, J., Bogduk, N., 1996. The value of history and physical examination in diagnosing sacroiliac joint pain. *Spine* 21, 2594.
- Edwards, I., Jones, M.A., 2007. Clinical reasoning and expert practice. In: Jensen, G.M., Gwyer, J., Hack, L.M., Shepard, K.F. (Eds.), *Expertise in*

- physical therapy practice, second ed Saunders Elsevier, St Louis.
- Egund, N., Olsson, T.H., Schmid, H., 1978. Movements in the sacro-iliac joints demonstrated with Roentgen stereophotogrammetry. *Acta Radiol.* 19, 833.
- Encyclopædia Britannica, 1981. Fifteenth ed. vol. 7. William Benton, Chicago.
- Ericsson, K.A., Smith, 1991. Towards a general theory of expertise: prospects and limits. Cambridge University Press, New York.
- Fabry, G., 1997. Normal and abnormal torsional development of the lower extremities. *Acta Orthop. Belg.* 63 (4), 229.
- Fafila, C.P., Prassopoulos, P.K., Daskalogiannaki, M.E., et al., 1998. Variations in the appearance of the normal sacroiliac joint on pelvic CT. *Clin. Radiol.* 53 (10), 742.
- Falvey, E.C., Franklyn-Miller, A., McCrory, P.R., 2009. The groin triangle: a patho-anatomical approach to the diagnosis of chronic groin pain in athletes. *Br. J. Sports Med.* 43, 213.
- Fantl, J.A., Newman, D.K., Colling, J., et al., 1996. Managing acute and chronic urinary incontinence. clinical practice guideline, no. 2. US Department of Health and Human Services, Rockville, MD.
- Farfan, H.F., 1973. Mechanical disorders of the low back. Lea & Febiger, Philadelphia.
- Farfan, H.F., 1978. The biomechanical advantage of lordosis and hip extension for upright activity. *Spine* 3, 336.
- Flynn, T., Fritz, J., Whitman, J., et al., 2002. A clinical prediction rule for classifying patients with low back pain who demonstrate short term improvement with spinal manipulation. *Spine* 27, 2835.
- Fortin, J.D., Dwyer, A., West, S., Pier, J., 1994a. Sacroiliac joint pain referral patterns upon application of a new injection/arthrography technique. I: Asymptomatic volunteers. *Spine* 19 (13), 1475.
- Fortin, J.D., Dwyer, A., Aprill, C., et al., 1994b. Sacroiliac joint pain referral patterns. II: Clinical evaluation. *Spine* 19 (13), 1483.
- Fortin, J.D., Kissling, R.O., O'Connor, B.L., Vilensky, J.A., 1999. Sacroiliac joint innervation and pain. *Am. J. Orthop.* 28 (12), 687.
- Freeman, M.A.R., Wyke, B.D., 1967. The innervation of the knee joint: an anatomical and histological study in the cat. *J. Anat.* 101, 505.
- Fritz, J.M., 2009. Clinical prediction rules in physical therapy: coming of age? *J. Orthop. Sports Phys. Ther.* 39 (3), 159.
- Fritz, J.M., Childs, J.D., Flynn, T.W., 2005. Pragmatic application of a clinical prediction rule in primary care to identify patients with low back pain with a good prognosis following a brief spinal manipulation intervention. *BMC Fam. Pract.* 6, 29.
- Fritz, J.M., Cleland, J.A., Childs, J.D., 2007. Subgrouping patients with low back pain: evolution of a classification approach to physical therapy. *J. Orthop. Sports Phys. Ther.* 37 (6), 290.
- Fryette, H.H., 1954. Principles of osteopathic technique. American Academy of Osteopathy, Colorado.
- Gamble, J.G., Simmons, S.C., Freedman, M., 1986. The symphysis pubis. Anatomic and pathologic considerations. *Clin. Orthop. Relat. Res.* (203), 261.
- Gandevia, S.C., 1992. Some central and peripheral factors affecting human motoneuronal output in neuromuscular fatigue. *Sports Med.* 13 (2), 93.
- Ganz, R., Parvizi, J., Beck, M., et al., 2003. Femoroacetabular impingement: a cause for osteoarthritis of the hip. *Clin. Orthop. Relat. Res.* 417, 112.
- Gerlach, U.J., Lierse, W., 1992. Functional construction of the sacroiliac ligamentous apparatus. *Acta Anat. (Basel)* 144, 97.
- Gibbons, S., Comerford, M., Emerson, P., 2002. Rehabilitation of the stability function of psoas major. *Orthopaedic Division Review* Jan/Feb, 9.
- Gifford, L., 1998. Pain, the tissues and the nervous system: a conceptual model. *Physiotherapy* 84 (1), 27.
- Gill, N.W., Teyhen, D.S., Lee, I.E., 2007. Improved contraction of the transversus abdominis immediately following spinal manipulation: a case study using real-time ultrasound imaging. *Man. Ther.* 12 (3), 280–285.
- Gilmore, J., 1998. Groin pain in the soccer athlete: fact, fiction and treatment. *Clin. Sports Med.* 17, 787.
- Gilmore, K.L., 1986. Biomechanics of the lumbar motion segment. In: Grieve, G.P. (Ed.), *Modern manual therapy of the vertebral column*. Churchill Livingstone, Edinburgh, p. 103.
- Gladwell, M.B., 2005. The power of thinking without thinking. Little, Brown and Company, New York.
- Goldthwait, J.E., Osgood, R.B., 1905. A consideration of the pelvic articulations from an anatomical, pathological and clinical standpoint. *Boston Medical and Surgical Journal* 152, 593.
- Gombatto, S.P., Collins, D.R., Sahrmann, S.A., Engsborg, J.R., Van Dillen, L.R., 2007. Patterns of lumbar region movement during trunk lateral bending in 2 subgroups of people with low back pain. *Phys. Ther.* 87 (4), 441.
- Goodall, J., 1979. Life and death at Gombé. *National Geographic* 155 (5), 59.
- Gracovetsky, S., 1997. Linking the spinal engine with the legs: a theory of human gait. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), *Movement, stability and low back pain*. Churchill Livingstone, Edinburgh, p. 243.
- Gracovetsky, S., Farfan, H.F., 1986. The optimum spine. *Spine* 11, 543.
- Gracovetsky, S., Farfan, H.F., Lamy, C., 1981. The mechanism of the lumbar spine. *Spine* 6, 249.
- Gracovetsky, S., Farfan, H., Helluer, C., 1985. The abdominal mechanism. *Spine* 10, 317.
- Gräbel, D., Prescher, A., Fitzek, S., von Keyserlingk, D.G., Axer, H., 2005. Anisotropy of human linea alba: a biomechanical study. *J. Surg. Res.* 124, 118.
- Greenman, P.E., 1990. Clinical aspects of sacroiliac function in walking. *Journal of Manual Medicine* 5, 125.
- Greenman, P.E., 1997. Clinical aspects of the sacroiliac joint in walking. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), *Movement, stability and low back pain*. Churchill Livingstone, Edinburgh, p. 235.
- Grenier, S.G., McGill, S.M., 2007. Quantification of lumbar stability by using 2 different abdominal activation strategies. *Arch. Phys. Med. Rehabil.* 88, 54.

- Grieve, G.P., 1981. Common vertebral joint problems. Churchill Livingstone, Edinburgh.
- Grieve, G.P., 1986. Modern manual therapy of the vertebral column. Churchill Livingstone, Edinburgh.
- Grob, K.R., Neuhuber, W.L., Kissling, R. O., 1995. Innervation of the sacroiliac joint of the human. *Z. Rheumatol.* 54, 117.
- Gunn, C.C., 1996. The Gunn approach to the treatment of chronic pain. Intramuscular stimulation for myofascial pain of radiculopathic origin. Churchill Livingstone, New York.
- Gutke, A., Ostgaard, H.C., Oberg, B., 2007. Predicting persistent pregnancy-related lumbopelvic pain. In: *Proceedings from the Sixth Interdisciplinary World Congress on Low Back and Pelvic Pain*, 6.
- Guyatt, G., Cairns, J., Churchill, D., et al., 1992. ['Evidence-Based Medicine Working Group'] Evidence-based medicine. A new approach to teaching the practice of medicine. *J. Am. Med. Assoc.* 268, 2420.
- Hagen, R., 1974. Pelvic girdle relaxation from an orthopaedic point of view. *Acta Orthop. Scand.* 45, 550.
- Hall, C.M., Brody, L.T., 1999. Therapeutic exercise – moving toward function. Lippincott/Williams & Wilkins, Philadelphia.
- Hanson, P., Sonesson, B., 1994. The anatomy of the iliolumbar ligament. *Arch. Phys. Med. Rehabil.* 75, 1245.
- Hebb, D.O., 1949. The organization of behavior: a neuropsychological theory. John Wiley & Sons, New York.
- Herzog, W., Read, L., Conway, P.J.W., Shaw, L.D., McEwen, M.C., 1989. Reliability of motion palpation procedures to detect sacroiliac joint fixations. *Journal of Manipulative and Physical Therapy* 12 (2), 86.
- Hewitt, J.D., Glisson, R.R., Guilak, F., Parker Vail, T., 2002. The mechanical properties of the human hip capsule ligaments. *J. Arthroplasty* 17 (1), 82.
- Hides, J.A., Richardson, C.A., Jull, G.A., 1995a. Magnetic resonance imaging and ultrasonography of the lumbar multifidus muscle; comparison of two different modalities. *Spine* 20 (1), 54.
- Hides, J.A., Richardson, C.A., Jull, G.A., 1996. Multifidus recovery is not automatic following resolution of acute first episode low back pain. *Spine* 21 (23), 2763.
- Hides, J.A., Stokes, M.J., Saide, M., Jull, G.A., Cooper, D.H., 1994. Evidence of lumbar multifidus muscles wasting ipsilateral to symptoms in patients with acute/subacute low back pain. *Spine* 19 (2), 165.
- Hides, J., Gilmore, C., Stanton, W., Bohlscheid, E., 2008. Multifidus size and symmetry among chronic LBP and healthy asymptomatic subjects. *Man. Ther.* 13 (1), 43.
- Higgs, J., 2004. Educational theory and principles related to learning clinical reasoning. In: Jones, M.A., Rivett, D.A. (Eds.), *Clinical reasoning for manual therapists*. Elsevier, Edinburgh.
- Higgs J Jones, M., 2000. Clinical reasoning in the health professions. In: Higgs, J., Jones, M.P. (Eds.), *Clinical reasoning in the health professions*, second ed. Butterworth-Heinemann, Oxford, p. 3.
- Higgs, J., Titchen, A., 1995. Propositional, professional and personal knowledge in clinical reasoning. In: Higgs, J., Jones, M. (Eds.), *Clinical reasoning in the health professions*, second ed. Butterworth-Heinemann, Oxford, p. 129.
- Hilton, P.S.L., Stanton, 1983. Urethral pressure measurement by micro-transducer: the results in symptom-free women and in those with genuine stress incontinence. *Br. J. Obstet. Gynaecol.* 90, 919.
- Hodges, P.W., 1997. Feedforward contraction of transversus abdominis is not influenced by the direction of arm movement. *Exp. Brain Res.* 114, 362.
- Hodges, P.W., 2001. Changes in motor planning of feedforward postural responses of the trunk muscles in low back pain. *Exp. Brain Res.* 141, 261.
- Hodges, P.W., 2003. Neuromechanical control of the spine. PhD thesis, Karolinska Institutet, Stockholm, Sweden.
- Hodges, P.W., 2005. Why do exercise interventions work for low back pain? In: *Proceedings of the Second International Conference on Movement Dysfunction, Pain & Performance: Evidence & Effect*. Edinburgh.
- Hodges, P.W., Butler, J.E., McKenzie, D.K., Gandevia, S.C., 1997. Contraction of the human diaphragm during rapid postural adjustments. *J. Physiol.* 505 (2), 539.
- Hodges, P.W., Cholewicki, J.J., 2007. Functional control of the spine. In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain*, second ed. Churchill Livingstone, Edinburgh, p. 489.
- Hodges, P.W., Cresswell, A.G., Daggfeldt, K., et al., 2000. Three dimensional preparatory trunk motion precedes asymmetrical upper limb movement. *Gait Posture* 11, 92.
- Hodges, P.W., Cresswell, A.G., Daggfeldt, K., Thorstensson, A., 2001a. In vivo measurement of the effect of intra-abdominal pressure on the human spine. *J. Biomech.* 34, 347.
- Hodges, P.W., Cresswell, A.G., Thorstensson, A., 1999. Preparatory trunk motion accompanies rapid upper limb movement. *Exp. Brain Res.* 124, 69.
- Hodges, P.W., Cresswell, A.G., Thorstensson, A., 2001b. Perturbed upper limb movements cause short-latency postural responses in trunk muscles. *Exp. Brain Res.* 138, 243.
- Hodges, P.W., Eriksson, A.E.M., Shirley, D., Gandevia, S.C., 2005. Intra-abdominal pressure increases stiffness of the lumbar spine. *J. Biomech.* 38, 1873.
- Hodges, P.W., Ferreira, P.H., Ferreira, M.L., 2009. Lumbar spine: treatment of instability and disorders of movement control. In: Magee, D.J., Zachazewski, J.E., Quillen, W.S. (Eds.), *Pathology and intervention in musculoskeletal rehabilitation*. Saunders Elsevier, St Louis, p. 389.
- Hodges, P.W., Gandevia, S.C., 2000a. Changes in intra-abdominal pressure during postural and respiratory activation of the human diaphragm. *J. Appl. Physiol.* 89, 967.
- Hodges, P.W., Gandevia, S.C., 2000b. Activation of the human diaphragm during a repetitive postural task. *J. Physiol.* 522 (1), 165.
- Hodges, P.W., Heininen, I., Gandevia, S.C., 2001c. Postural activity of the diaphragm is reduced in humans when respiratory demand increases. *J. Physiol.* 537 (3), 999.
- Hodges, P.W., Holm, A.K., Hansson, T., et al., 2006. Rapid atrophy of the lumbar multifidus follows experimental disc or nerve root injury. *Spine* 31 (25), 2926.

- Hodges, P.W., Kaigle Holm, A., Holm, S., et al., 2003a. Intervertebral stiffness of the spine is increased by evoked contraction of transversus abdominis and the diaphragm: in vivo porcine studies. *Spine* 28 (23), 2594.
- Hodges, P.W., Moseley, G.L., 2003. Pain and motor control of the lumbopelvic region: effect and possible mechanisms. *J. Electromyogr. Kinesiol.* 13, 361.
- Hodges, P.W., Moseley, G.L., Bagriellsson, A., 2003b. Experimental muscle pain changes feedforward postural responses of the trunk muscles. *Exp. Brain Res.* 151, 262.
- Hodges, P.W., Richardson, C.A., 1996. Inefficient muscular stabilization of the lumbar spine associated with low back pain: a motor control evaluation of transversus abdominis. *Spine* 21 (22), 2640.
- Hodges, P.W., Richardson, C.A., 1997. Contraction of the abdominal muscles associated with movement of the lower limb. *Phys. Ther.* 77, 132.
- Hodges, P.W., Sapsford, R., Pengel, L.H.M., 2007. Postural and respiratory functions of the pelvic floor muscles. *Neurourol. Urodyn.* 26 (3), 362.
- Howard, D., Miller, J.M., DeLancey, J.O.L., et al., 2000. Differential effects of cough, Valsalva, and continence status on vesical neck movement. *Obstet. Gynecol.* 95 (4), 535.
- Hungerford, B., Gilleard, W., Hodges, P., 2003. Evidence of altered lumbopelvic muscle recruitment in the presence of sacroiliac joint pain. *Spine* 28 (14), 1593.
- Hungerford, B., Gilleard, W., Lee, D., 2004. Alteration of pelvic bone motion determined in subjects with posterior pelvic pain using skin markers. *Clin. Biomech. (Bristol, Avon)* (19), 456.
- Hungerford, B., Gilleard, W., Moran, M., et al., 2007. Evaluation of the reliability of therapists to palpate intra-pelvic motion using the stork test on the support side. *J. Phys. Ther.* 87 (7), 879.
- Hunt, D., Clohisy, J., Prather, H., 2007. Acetabular labral tears of the hip in women. *Phys. Med. Rehabil. Clin. N. Am.* 18, 497.
- Indahl, A., Kaigle, A.M., Reikeras, O., et al., 1997. Interaction between the porcine lumbar intervertebral disc, zygapophysial joints, and paraspinal muscles. *Spine* 22 (24), 2834.
- Indahl, A., Kaigle, A., Reikeras, O., et al., 1995. Electromyographic response of the porcine multifidus musculature after nerve stimulation. *Spine* 20 (24), 2652.
- Indahl, A., Kaigle, A., Reikeras, O., et al., 1999. Sacroiliac joint involvement in activation of the porcine spinal and gluteal musculature. *J. Spinal Disord.* 12 (4), 325.
- Inman, V.T., Ralston, H.J., Todd, F., 1981. Human walking. Williams & Wilkins, Baltimore.
- Intolo, P., Milosavljevic, S., Baxter, D.G., et al., 2009. The effect of age on lumbar range of motion: a systematic review. *Man. Ther.* 14 (6), 596.
- Jacob, H.A.C., Kissling, R.O., 1995. The mobility of the sacroiliac joints in healthy volunteers between 20 and 50 years of age. *Clin. Biomech. (Bristol, Avon)* 10 (7), 352.
- Janda, V., 1978. Muscles, central nervous motor regulation and back problems. In: Korr, I. (Ed.), *The neurobiologic mechanisms in manipulative therapy*. Plenum Press, London, p. 27.
- Janda, V., 1986. Muscle weakness and inhibition (pseudoparesis) in back pain syndromes. In: Grieve, G.P. (Ed.), *Modern manual therapy of the vertebral column*. Churchill Livingstone, Edinburgh, p. 197.
- Jarcho, J., 1929. Value of Walcher position in contracted pelvis with special reference to its effect on true conjugate diameter. *Surg. Gynecol. Obstet.* 49, 854.
- Jensen, G.M., Gwyer, J., Hack, L.M., Shepard, K.F., 2007. Expertise in physical therapy practice, second ed. Saunders, St Louis.
- Jones, M.A., Rivett, D., 2004. Introduction to clinical reasoning. In: Jones, M.A., Rivett, D.A. (Eds.), *Clinical reasoning for manual therapists*. Elsevier, Edinburgh, p. 3.
- Kaigle, A.M., Wessberg, P., Hansson, T.H., 1998. Muscular and kinematic behavior of the lumbar spine during flexion-extension. *J. Spinal Disord.* 11 (2), 163.
- Kampen, W.U., Tillmann, B., 1998. Age-related changes in the articular cartilage of human sacroiliac joint. *Anat. Embryol. (Berlin)* 198 (6), 505.
- Kang, C.H., Shin, M.J., Kim, S.M., et al., 2007. MRI of paraspinal muscles in lumbar degenerative kyphosis patients and control patients with chronic low back pain. *Clin. Radiol.* 62 (5), 479.
- Kang, Y.M., Choi, W.S., Pickar, J.G., 2002. Electrophysiologic evidence for an intersegmental reflex pathway between lumbar paraspinal tissues. *Spine* 27 (3), E56.
- Kapandji, I.A., 1970. The physiology of the joints II: the lower limb, second ed. Churchill Livingstone, Edinburgh.
- Kapandji, I.A., 1974. The physiology of the joints III: the trunk and vertebral column, second ed. Churchill Livingstone, Edinburgh.
- Kassarjian, A., Brisson, M., Palmer, W.E., 2007. Femoroacetabular impingement. *Eur. J. Radiol.* 63, 29.
- Kavicic, N., Grenier, S., McGill, S.M., 2004. Determining the stabilizing role of individual torso muscles during rehabilitation exercises. *Spine* 29 (11), 1254.
- Keagy, R.D., Brumlik, J., 1966. Direct electromyography of the psoas major muscle in man. *J. Bone Joint Surg.* 48A, 1377.
- Kendall, F.P., Kendall McCreary, E., Provance, P.G., 1993. Muscles testing and function, fourth ed. Williams & Wilkins, Baltimore.
- Kerry, R., 2009. Clinical reasoning in combined movement theory. In: McCarthy, C. (Ed.), *Combined movement theory: rational mobilization and manipulation of the vertebral column*. Elsevier (in press).
- Kerry, R., Maddocks, M., Mumford, S., 2008. Philosophy of science and physiotherapy: an insight into practice. *Physiother. Theory Pract.* 24 (6), 1.
- Kirkaldy-Willis, W.H. (Ed.), 1983. Managing low back pain. Churchill Livingstone, New York.
- Kirkaldy-Willis, W.H., Hill, R.J., 1979. A more precise diagnosis for low back pain. *Spine* 4, 102.
- Kirkaldy-Willis, W.H., Wedge, J.H., Yong-Hing, K., et al., 1978. Pathology and pathogenesis of lumbar spondylosis and stenosis. *Spine* 3, 319.
- Kjaer, P., Bendix, T., Sorensen, J.S., et al., 2007. Are MRI-defined fat infiltrations in the multifidus muscles associated with low back pain? *BCM Med.* 5, 2.
- Knox, 2002. The functional anatomy of the thoracolumbar fascia and associated muscles and ligaments.

- Masters Thesis. University of Otago, Dunedin, New Zealand.
- Koes, B.W., van Tulder, M.W., Ostelo, R., et al., 2001. Clinical guidelines for the management of low back pain in primary care: an international comparison. *Spine* 26, 2504.
- Kristiansson, P., 1997. S-Relaxin and pelvic pain in pregnant women. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), *Movement, stability and low back pain*. Churchill Livingstone, Edinburgh, p. 421.
- Kunduracioglu, B., Yilmaz, C., Yorubulut, M., Kudas, S., 2007. Magnetic resonance findings of osteitis pubis. *J. Magn. Reson. Imaging* 25, 535.
- Laslett, M., Aprill, C.H., McDonald, B., et al., 2005. Diagnosis of sacroiliac joint pain: validity of individual provocation tests and composites of tests. *Man. Ther.* 10, 207.
- Laslett, M., Williams, W., 1994. The reliability of selected pain provocation tests for sacroiliac joint pathology. *Spine* 19 (11), 1243.
- Lavignolle, B., Vital, J.M., Senegas, J., et al., 1983. An approach to the functional anatomy of the sacroiliac joints in vivo. *Anat. Clin.* 5, 169.
- Lawrence, J.S., Bremner, J.M., Bier, F., 1966. Osteoarthritis: prevalence in the population and relationship between symptoms and X-ray changes. *Ann. Rheum. Dis.* 25, 1.
- Lawson, T.L., Foley, W.D., Carrera, G.F., Berland, L.L., 1982. The sacroiliac joints: anatomic, plain roentgenographic, and computed tomographic analysis. *J. Comput. Assist. Tomogr.* 6 (2), 307.
- Leboeuf-Yde, C., Lauritsen, J.M., Lauritzen, T., 1997. Why has the search for causes of low back pain largely been inconclusive? *Spine* 22 (8), 877.
- Lee, D.G., 1992. Intra-articular versus extra-articular dysfunction of the sacroiliac joint – a method of differentiation. In: *IFOMT Proceedings, 5th international conference*. Vail, Colorado, p. 69.
- Lee, D.G., 1993. Biomechanics of the thorax: a clinical model of in vivo function. *Journal of Manual and Manipulative Therapy* 1, 13.
- Lee, D.G., 1999. *The pelvic girdle*, second ed. Churchill Livingstone, Edinburgh.
- Lee, D.G., 2002. *The Com-Pressor*. Available online at: www.dianelee.ca or www.optp.com.
- Lee, D.G., 2003. *The thorax – an integrated approach*. Diane G. Lee Physiotherapist Corporation, Surrey, Canada. Available online at: www.dianelee.ca. www.discoverphysio.ca.
- Lee, D.G., 2004. *The pelvic girdle*, third ed. Churchill Livingstone, Edinburgh.
- Lee, D.G., 2006. Foreword. In: Morris, C.E. (Ed.), *Low back syndromes. Integrated clinical management*. McGraw-Hill, New York, p. xvii.
- Lee, D.G., 2007a. The evolution of myths and facts regarding function and dysfunction of the pelvic girdle. In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain: integration of research and therapy*, second ed. Churchill Livingstone, Edinburgh.
- Lee, D.G., 2007b. Clinical expertise in evidence-based practice for pelvic girdle pain – show me the patient!. In: *Proceedings from the Sixth Interdisciplinary World Congress on Low Back and Pelvic Pain*, Barcelona, November, p. 27.
- Lee, D.G., Lee, L.J., 2004a. An integrated approach to the assessment and treatment of the lumbopelvic-hip region. Available online at www.discoverphysio.ca. www.dianelee.ca.
- Lee, D.G., Lee, L.J., 2004b. Stress urinary incontinence – a consequence of failed load transfer through the pelvis? In: *Proceedings from the 5th Interdisciplinary World Congress on Low Back and Pelvic Pain*, Melbourne, Australia, p. 138.
- Lee, D.G., Lee, L.J., 2006. Postpartum health for moms – restoring form and function after pregnancy. Available online at www.discoverphysio.ca.
- Lee, D.G., Lee, L.J., 2007. Bridging the gap: the role of the pelvic floor in musculoskeletal and urogynecological function. In: *Proceedings of the World Physical Therapy Conference*, Vancouver, Canada.
- Lee, D.G., Lee, L.J., 2008a. Integrated, multimodal approach to the treatment of pelvic girdle pain and dysfunction. In: Magee, D.J., Zachazewski, J.E., Quillen, W.S. (Eds.), *Pathology and intervention in musculoskeletal rehabilitation*. Elsevier, Saunders, p. 473.
- Lee, D.G., Lee, L.J., McLaughlin, L.M., 2008a. Stability, continence and breathing: the role of fascia following pregnancy and delivery. *Journal of Bodywork and Movement Therapies* 12, 333.
- Lee, D.G., Vleeming, A., 1998. Impaired load transfer through the pelvic girdle – a new model of altered neutral zone function. In: *Proceedings from the 3rd Interdisciplinary World Congress on Low Back and Pelvic Pain*. Vienna, Austria.
- Lee, D.G., Vleeming, A., 2004. The management of pelvic joint pain and dysfunction. In: Boyling, J.D., Jull, G. (Eds.), *Grieve's modern manual therapy. The vertebral column*, third ed. Elsevier, Churchill Livingstone, p. 495.
- Lee, D.G., Vleeming, A., 2007. An integrated therapeutic approach to the treatment of pelvic girdle pain. In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain*, second ed. Elsevier, Edinburgh, p. 621.
- Lee, L.J., 2003. Restoring force closure/motor control of the thorax. In: Lee, D. (Ed.), *The thorax – an integrated approach*. Available online at www.dianelee.ca.
- Lee, L.J., Chang, A.T., Coppieters, M.W., Hodges, P.W., 2010. Changes in sitting posture induce multiplanar changes in chest wall shape and motion with breathing. *Respir. Physiol. Neurobiol.* 170 (3), 236.
- Lee, L.J., Coppieters, M.W., Hodges, P.W., 2009. Anticipatory postural adjustments to arm movement reveal complex control of paraspinal muscles in the thorax. *J. Electromyogr. Kinesiol.* 19 (1), 46.
- Lee, L.J., Lee, D.L., 2008b. Integrated, multimodal approach to the thoracic spine and ribs. In: Magee, D.J., Zachazewski, J.E., Quillen, W.S. (Eds.), *Pathology and intervention in musculoskeletal rehabilitation*. Saunders, Elsevier, p. 306.
- Lee, M.W.L., McPhee, R.W., Stringer, M.D., 2008b. An evidence-based approach to human dermatomes. *Clin. Anat.* 21, 363.

- Leffler, K.S., Thompson, J.R., Cundiff, G.W., et al., 2001. Attachment of the rectovaginal septum to the pelvic sidewall. *Am. J. Obstet. Gynecol.* 185 (1), 41.
- Leong, J.C.Y., Luk, D.K., Chow, D.H.K., Woo, C.W., 1987. The biomechanical functions of the iliolumbar ligament in maintaining stability of the lumbosacral junction. *Spine* 12, 669.
- Leshner, J.M., Dreyfuss, P., Hager, N., 2008. Hip joint pain referral patterns: a descriptive study. *Pain Med.* 9 (1), 22.
- Levin, S.M., 1997. A different approach to the mechanics of the human pelvis: tensegrity. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), *Movement, stability and low back pain*. Churchill Livingstone, Edinburgh, p. 157.
- Loeser, J.D., Treede, R., 2008. The Kyoto protocol of IASP basic pain terminology. *Pain* 137, 477.
- Lovejoy, C.O., 2007. Evolution of the human lumbopelvic region and its relationship to some clinical deficits of the spine and pelvis. In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain*, second ed. Churchill Livingstone, Edinburgh, p. 141.
- Lovett, R.W., 1903. A contribution to the study of the mechanics of the spine. *Am. J. Anat.* 2, 457.
- Lucas, D., Bresler, B., 1961. Stability of the ligamentous spine. In: Technical report no. 40. Biomechanics Laboratory, University of California, San Francisco.
- Luk, K.D.K., Ho, H.C., Leong, J.C.Y., 1986. The iliolumbar ligament: a study of its anatomy, development and clinical significance. *J. Bone Joint Surg.* 68B, 197.
- Lund, P.J., Drupinski, E.A., Brooks, W.J., 1996. Ultrasound evaluation of sacroiliac motion in normal volunteers. *Acad. Radiol.* 3, 192.
- Lynch, F.W., 1920. The pelvic articulations during pregnancy, labor, and the puerperium. *Surg. Gynecol. Obstet.* 30, 575.
- MacConaill, M.A., Basmajian, J.V., 1977. *Muscles and movements; a basis for human kinesiology*, second ed. Krieger, New York.
- MacDonald, D.A., Moseley, G.L., Hodges, P.W., 2006. The lumbar multifidus: does the evidence support clinical beliefs? *Man. Ther.* 11 (4), 254.
- MacDonald, D., Moseley, G.L., Hodges, P.W., 2009. Why do some patients keep hurting their back? Evidence of ongoing back muscle dysfunction during remission from recurrent back pain. *Pain* 142 (3), 183.
- MacDonald, G.R., Hunt, T.E., 1951. Sacro-iliac joint observations on the gross and histological changes in the various age groups. *Can. Med. Assoc. J.* 66, 157.
- MacIntosh, J.E., Bogduk, N., 1991. The attachments of the lumbar erector spinae. *Spine* 16 (7), 783.
- MacNab, I., 1977. *Backache*. Williams & Wilkins, Baltimore.
- Magee, D.J., Zachazewski, J.E., Quillen, W.S., 2007. *Scientific foundations and principles of practice in musculoskeletal rehabilitation*. Saunders Elsevier, St Louis.
- Magee, D.J., Zachazewski, J.E., Quillen, W.S., 2009. *Pathology and intervention in musculoskeletal rehabilitation*. Saunders Elsevier, St Louis.
- Magora, A., Schwartz, A., 1976. Relation between the low back pain syndrome and x-ray findings 1. Degenerative osteoarthritis. *Scand. J. Rehabil. Med.* 8, 115.
- Magnusson, M.L., Aleksiev, A., Wilder, D.G., et al., 1996. Unexpected load and asymmetric posture as etiologic factors in low back pain. *European Spine Society – the AcroMed Prize for Spinal Research* 1995. *Eur. Spine J.* 5 (1), 23.
- Mahncke, H.W., Bronstone, A., Merzinich, M.M., 2006. Brain plasticity and functional losses in the aged: scientific bases for a novel intervention. *Prog. Brain Res.* 157, 81.
- Maigne, J.Y., 1997. Lateral dynamic X-rays in the sitting position and coccygeal discography in common coccydynia. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), *Movement, stability and low back pain*. Churchill Livingstone, Edinburgh, p. 385.
- Maigne, J.Y., Aivaliklis, A., Pfefer, F., 1996. Results of sacroiliac joint double block and value of sacroiliac pain provocation tests in 54 patients with low back pain. *Spine* 21, 1889.
- Marin Valladolid, J.A., Saucedo Ortiz, J.A., Orozco, C.F., et al., 2004. Variation of intraabdominal pressure caused by abdominoplasty in healthy women. *Rev. Gastroenterol. Mex.* 69 (3), 156.
- Marnach, M.L., Ramin, K.D., Ramsey, P.S., et al., 2003. Characterization of the relationship between joint laxity and maternal hormones in pregnancy. *Obstet. Gynecol.* 101 (2), 331.
- Masani, K., Sin, V.W., Vette, A.H., et al., 2009. Postural reactions of the trunk muscles to multi-directional perturbations in sitting. *Clin. Biomech. (Bristol, Avon)* 24 (2), 176.
- Mason, J.B., 2001. Acetabular labrum tears. *Diagnosis and treatment. Clin. Sports Med.* 20, 779.
- McCarthy, J., Nable, P., Alusio, F.V., et al., 2003. Anatomy, pathologic features and treatment of acetabular labral tears. *Clin. Orthop. Relat. Res.* 403, 38.
- McGill, S., 2002. *Low back disorders – evidence-based prevention and rehabilitation*. Human Kinetics, Canada.
- McGill, S.M., Cholewicki, J.J., 2001. Biomechanical basis for stability: an explanation to enhance clinical utility. *J. Orthop. Sports Phys. Ther.* 31, 96.
- McGill, S.M., Stuart, M., 2004. Linking latest knowledge of injury mechanisms and spine function to the prevention of low back disorders. *J. Electromyogr. Kinesiol.* 14 (1), 43.
- McGill, S.M., Grenier, S., Kavcic, N., et al., 2003. Coordination of muscle activity to assure stability of the lumbar spine. *J. Electromyogr. Kinesiol.* 13, 353.
- McKenzie, R.A., 1981. *The lumbar spine: mechanical diagnosis and therapy*. Spinal Publications, Wellington, New Zealand.
- McLain, R.F., Pickar, J.G., 1998. Mechanoreceptor endings in human thoracic and lumbar facet joints. *Spine* 23 (2), 168.
- McLauchlan, G.J., Gardner, D.L., 2002. Sacral and iliac articular cartilage thickness and cellularity: relationship to subchondral bone end-plate thickness and cancellous bone density. *Rheumatology* 41, 375.

- McLaughlin, L.M., 2008. The role of focused manipulation in back pain. Presented at: North American Institute of Orthopaedic Manipulative Therapy Symposium on Spinal Manipulation, Portland, OR.
- McNeill, A.R., 1997. Elasticity in human and animal backs. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), *Movement, stability and low back pain*. Churchill Livingstone, Edinburgh, p. 227.
- Meijne, W., van Neerbos, K., Aufdemkampe, G., et al., 1999. Intraexaminer and interexaminer reliability of the Gillet test. *J. Manipulative Physiol. Ther.* 22 (1), 4.
- Meisenbach, R.O., 1911. Sacro-iliac relaxation; with analysis of eighty-four cases. *Surg. Gynecol. Obstet.* 12, 411.
- Melzack, R., 2001. Pain and the neuromatrix in the brain. *J. Dent. Educ.* 65 (12), 1378.
- Melzack, R., 2005. 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 Pract.* 5 (2), 85.
- Melzack, R., Wall, P.D., 1965. Pain mechanisms: a new theory. *Science* 150, 971.
- Mens, J.M.A., Vleeming, A., Snijders, C.J., Koes, B.J., Stam, H.J., 2001. Reliability and validity of the active straight leg raise test in posterior pelvic pain since pregnancy. *Spine* 26 (10), 1167.
- Mens, J.M.A., Vleeming, A., Snijders, C.J., Stam, H.J., Ginai, A.Z., 1999. The active straight leg raising test and mobility of the pelvic joints. *Eur. Spine J.* 8, 468.
- Mens, J.M., Vleeming, A., Snijders, C.J., Koes, B.W., Stam, H.J., 2002. Validity of the active straight leg raise test for measuring disease severity in patients with posterior pelvic pain after pregnancy. *Spine* 27 (2), 196.
- Merskey, H., Bogduk, N. (Eds.), 1994. *Classification of chronic pain: descriptions of chronic pain syndromes and definitions of pain terms*, second ed. Prepared by the Task Force on Taxonomy of the International Association for the Study of Pain. IASP Press, Seattle, USA.
- Merzenich, M., Wright, B., Jenkins, W., et al., 1996. Cortical plasticity underlying perceptual, motor, and cognitive skill development: implications for neurorehabilitation. *Cold Spring Harb. Symp. Quant. Biol.* 61, 1-8.
- Meyer, G.H., 1878. Der Mechanismus der Symphysis sacroiliaca. *Archiv für Anatomie und Physiologie* 1, 1.
- Mezirow, J., 1990. Fostering critical reflection in adulthood: a guide to transformative and emancipator learning. Jossey-Bass, San Francisco.
- Miller, J.A.A., Schultz, A.B., Andersson, G.B.J., 1987. Load-displacement behavior of sacro-iliac joints. *J. Orthop. Res.* 5, 92.
- Miller, W.R., Rollnick, S., 2002. *Motivational interviewing: preparing people for change*, second ed. Guilford Press, New York.
- Mixter, W.J., Barr, J.S., 1934. Rupture of intervertebral disc with involvement of the spinal cord. *N. Engl. J. Med.* 211, 210.
- Mok, N.W., Brauer, S.G., Hodges, P.W., 2007. Failure to use movement in postural strategies leads to increased spinal displacement in low back pain. *Spine* 32 (19), E537.
- Mørkved, S., Salvesen, K.A., Bø, K., et al., 2004. Pelvic floor muscle strength and thickness in continent and incontinent nulliparous pregnant women. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 15, 384.
- Morris, D.M., Taub, E., Mark, V.W., 2006. Constraint-induced movement therapy: characterizing the intervention protocol. *Eura. Medicophys.* 42 (3), 257.
- Moseley, G.L., 2002. Combined physiotherapy and education is efficacious for chronic low back pain. *Aust. J. Physiother.* 48, 297.
- Moseley, G.L., 2003a. A pain neuromatrix approach to patients with chronic pain. *Man. Ther.* 8 (3), 130.
- Moseley, G.L., 2003b. Unraveling the barriers to reconceptualization of the problem in chronic pain: the actual and perceived ability of patients and health professionals to understand the neurophysiology. *J. Pain* 4 (4), 184.
- Moseley, G.L., 2007a. Motor control in chronic pain: new idea for effective intervention. In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain*, second ed. Elsevier, Edinburgh, p. 513.
- Moseley, G.L., 2007b. Reconceptualising pain according to modern pain science. *Phys. Ther. Rev.* 12, 169.
- Moseley, G.L., Hodges, P.W., 2004. Are the changes in postural control associated with low back pain caused by pain interference? *Clin. J. Pain* 21 (4), 323.
- Moseley, G.L., Hodges, P.W., 2005. Chronic pain and motor control. In: Jull, G., Boyling, J. (Eds.), *Grieve's modern manual therapy. The vertebral column*. Churchill Livingstone, Edinburgh, p. 215.
- Moseley, G.L., Hodges, P.W., Gandevia, S.C., 2002. Deep and superficial fibers of the lumbar multifidus muscle are differentially active during voluntary arm movements. *Spine* 27 (2), E29.
- Moseley, G.L., Hodges, P.W., Gandevia, S.C., 2003. External perturbation of the trunk in standing humans differentially activates components of the medial back muscles. *J. Physiol.* 547 (2), 581.
- Moucha, R., Kilgard, M.P., 2006. Cortical plasticity and rehabilitation. *Prog. Brain Res.* 157, 111.
- Myers, T.W., 2001. *Anatomy trains*. Churchill Livingstone, Edinburgh.
- Nachemson, A., 1999. Back pain; delimiting the problem in the next millennium. *Int. J. Law Psychiatry* 22 (5-6), 473.
- Nelson, H., Jurmain, R., 1985. *Introduction to physical anthropology*, third ed. West Publishing, St Paul.
- Neumann, P., Gill, V., 2002. Pelvic floor and abdominal muscle interaction: EMG activity and intra-abdominal pressure. *Int. Urogynecol. J.* 13, 125.
- Nygaard, I.E., Thompson, F.L., Svengalis, S.L., et al., 1994. Urinary incontinence in elite nulliparous athletes. *Obstet. Gynecol.* 84 (2), 183.
- Orlick, T., 2008. *In pursuit of excellence*, fourth ed. Human Kinetics, Champaign, IL.
- O'Sullivan, P., 2000. Lumbar segmental "instability": clinical presentation and

- specific stabilizing exercise management. *Man. Ther.* 5 (1), 2.
- O'Sullivan, P., 2005. Diagnosis and classification of chronic low back pain disorders: maladaptive movement and motor control impairments as underlying mechanism. *Man. Ther.* 10 (4), 242.
- O'Sullivan, P.B., Beales, D., Beetham, J. A., et al., 2002. Altered motor control strategies in subjects with sacroiliac joint pain during the active straight leg raise test. *Spine* 27 (1), E1.
- O'Sullivan, P., Beales, D., 2007. Diagnosis and classification of pelvic girdle pain disorders – Part 1: a mechanism based approach within a biopsychosocial framework. *Man. Ther.* 12, 86.
- Ostgaard, H.C., 1997. Lumbar back and posterior pelvic pain in pregnancy. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), *Movement, stability and low back pain*. Churchill Livingstone, Edinburgh, p. 411.
- Ostgaard, H.C., 2007. What is pelvic girdle pain? In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain*, second ed. Elsevier, Edinburgh, p. 353.
- Ostgaard, H.C., Andersson, G.B.J., Karisson, K., 1991. Prevalence of back pain in pregnancy. *Spine* 16, 49.
- Ostgaard, H.C., Andersson, 1992. Postpartum low back pain. *Spine* 17 (1), 53.
- Ostgaard, H.C., Zetherstrom, G., Roos-Hansson, E., 1994. The posterior pelvic pain provocation test in pregnant women. *Eur. Spine J.* 3, 258.
- Panjabi, M.M., 1992a. The stabilizing system of the spine. Part I: function, dysfunction, adaptation, and enhancement. *J. Spinal Disord.* 5 (4), 383.
- Panjabi, M.M., 1992b. The stabilizing system of the spine. Part II. Neutral zone and instability hypothesis. *J. Spinal Disord.* 5 (4), 390.
- Panjabi, M.M., 2006. A hypothesis of chronic back pain: ligament subfailure injuries lead to muscle control dysfunction. *Eur. Spine J.* 15, 668.
- Paris, S., 2000. A history of manipulative therapy through the ages and up to the current controversy in the United States *Journal of Manual and Manipulative Therapy* 8, 2.
- Paterson, I., 1957. The torn acetabular labrum: a block to reduction of a dislocated hip. *J. Bone Joint Surg. Br.* 39, 306.
- Pearcy, M., Tibrewal, S.B., 1984. Axial rotation and lateral bending in the normal lumbar spine measured by three-dimensional radiography. *Spine* 9, 582.
- Pearson, N., 2007. Understand pain, live well again. Available online at www.lifeisnow.ca.
- Pel, J.J.M., Spoor, C.W., Pool-Goudzwaard, A.L., et al., 2008. Biomechanical analysis of reducing sacroiliac joint shear load by optimization of pelvic muscle and ligament forces. *Ann. Biomed. Eng.* 36 (3), 415.
- Peng, Q., Jones, R., Constantinou, C.E., 2006. 2D Ultrasound image processing in identifying responses of urogenital structures to pelvic floor muscle activity. *Ann. Biomed. Eng.* 34 (3), 477.
- Peng, Q., Jones, R., Shishido, K., et al., 2007. Ultrasound evaluation of dynamic responses of female pelvic floor muscles. *Ultrasound Med. Biol.* 33 (3), 342.
- Pengel, L.H., Herbert, R.D., Maher, C. G., et al., 2003. Acute low back pain: systematic review of its prognosis. *Br. Med. J.* 327, 323.
- Peschers, U.M., Ganger, G., Schaer, G. N., et al., 2001. Bladder neck mobility in continent nulliparous women. *Br. J. Obstet. Gynaecol.* 108, 320.
- Pettman, E., 2006. Manipulative thrust techniques: an evidence-based approach. Aphema Publishing, Abbotsford, Canada.
- Pettman, E., 2007. A history of manipulative therapy. *Journal of Manual and Manipulative Therapy* 15 (3), 165.
- Pickar, J.G., 2002. Neurophysiological effects of spinal manipulation. *Spine* 2 (5), 357.
- Pickering, M., Jones, J.F.X., 2002. The diaphragm: two physiological muscles in one. *J. Anat.* 201, 305.
- Pitkin, H.C., Pheasant, H.C., 1936. Sacroarthrogenetic telalgia II. A study of sacral mobility. *J. Bone Joint Surg.* 18, 365.
- Pool-Goudzwaard, A., Hoek van Dijke, G., Mulder, P., et al., 2003. The iliolumbar ligament: its influence on stability of the sacroiliac joint. *Clin. Biomech. (Bristol, Avon)* 18 (2), 99.
- Pool-Goudzwaard, A., Hoek van Dijke, G., van Gurp, M., et al., 2004. Contribution of pelvic floor muscles to stiffness of the pelvic ring. *Clin. Biomech. (Bristol, Avon)* 19, 564.
- Pool-Goudzwaard, A., Kleinrensink, G., Snijders, C.J., et al., 2001. The sacroiliac part of the iliolumbar ligament. *J. Anat.* 199, 457.
- Pool-Goudzwaard, A., Sliker ten Hove, M.C., Vierhout, M.E., et al., 2005. Relations between pregnancy-related low back pain, pelvic floor activity and pelvic floor dysfunction. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 16 (6), 468.
- Popper, K., 1980. The logic of scientific discovery, fourth ed. Routledge, London.
- Porterfield, J.A., DeRosa, C., 1998. Mechanical low back pain. Perspective in functional anatomy. W B Saunders, Philadelphia.
- Potter, N.A., Rothstein, J., 1985. Interrater reliability for selected clinical tests of the sacroiliac joint. *Phys. Ther.* 65 (11), 1671.
- Primal Pictures, 2003. Interactive pelvis and perineum. Available online at www.primalpictures.com.
- Puhakka, K.B., Melsen, F., Jurik, A.G., et al., 2004. MR imaging of the normal sacroiliac joint with correlation to histology. *Skeletal Radiol.* 33, 15.
- Radebold, A., Cholewicki, J., Panjabi, M. M., et al., 2000. Muscle response pattern to sudden trunk loading in healthy individuals and in patients with chronic low back pain. *Spine* 25 (8), 947.
- Radebold, A., Cholewicki, J., Polzhofer, G.K., et al., 2001. Impaired postural control of the lumbar spine is associated with delayed muscle response times in patients with chronic idiopathic low back pain. *Spine* 26 (7), 724.
- Rath, A.M., Attali, P., Dumas, J.L., et al., 1996. The abdominal linea alba: an anatomico-radiologic and biomechanical study. *Surg. Radiol. Anat.* 18, 281.
- Reeves, N.P., Cholewicki, J., Milner, T. E., 2005. Muscle reflex classification of low-back pain. *J. Electromyogr. Kinesiol.* 15 (1), 53.
- Reeves, N.P., Everding, V.Q., Cholewicki, J., Morrisette, D.C.,

2006. The effects of trunk stiffness on postural control during unstable seated balance. *Exp. Brain Res.* 174 (4), 694.
- Reeves, N.P., Narendra, K.S., Cholewicki, J., 2007. Spine stability: the six blind men and the elephant. *Clin. Biomech. (Bristol, Avon)* 22 (3), 266.
- Reikeras, O., Bjerkrein, I., Kolbenstvedt, A., 1983. Anteversion of the acetabulum and femoral neck in normals and in patients with osteoarthritis of the hip. *Acta Orthop. Scand.* 54 (1), 18.
- Reilly, J., Yong-Hing, K., MacKay, R.W., et al., 1978. Pathological anatomy of the lumbar spine. In: Helfet, A.J., Gruebel-Lee, D.M. (Eds.), *Disorders of the lumbar spine*. J B Lippincott, Philadelphia.
- Resnick, D., Niwayama, G., Goergen, T. G., 1975. Degenerative disease of the sacroiliac joint. *J. Invest. Radiol.* 10, 608.
- Retzky, S.S., Rogers, R.M., 1995. Urinary incontinence in women. *Clin. Symp.* 47 (3), 2.
- Richardson, C.A., Jull, G.A., Hodges, P. W., Hides, J.A., 1999. Therapeutic exercise for spinal segmental stabilization in low back pain – scientific basis and clinical approach. Churchill Livingstone, Edinburgh.
- Richardson, C.A., Snijders, C.J., Hides, J.A., et al., 2002. The relationship between the transversely oriented abdominal muscles, sacroiliac joint mechanics and low back pain. *Spine* 27 (4), 399.
- Riddle, D.L., 1998. Classification and low back pain: a review of the literature and critical analysis of selected systems. *Phys. Ther.* 78, 708.
- Rivett, D.A., Jones, M.A., 2004. Improving clinical reasoning in manual therapy. In: Jones, M.A., Rivett, D. (Eds.), *Clinical reasoning for manual therapists*. Elsevier, Edinburgh, p. 403.
- Rizk, N.N., 1980. A new description of the anterior abdominal wall in man and mammals. *J. Anat.* 131, 373.
- Robinson, H.S., Brox, J.I., Robinson, R., et al., 2007. The reliability of selected motion- and pain provocation tests for the sacroiliac joint. *Man. Ther.* 12 (1), 72.
- Robinson, P., Barron, D.A., Parsons, W., et al., 2004. Adductor-related groin pain in athletes: correlation of MR imaging with clinical findings. *Skeletal Radiol.* 33, 451.
- Rodman, P.S., McHenry, M., 1980. Bioenergetics and the origin of hominid bipedalism. *Am. J. Phys. Anthropol.* 52, 103.
- Rodriguez, C., Miguel, A., Lima, H., Heinrichs, K., 2001. Osteitis pubis syndrome in the professional soccer athlete: a case report. *J. Athl. Train.* 36, 437.
- Rohen, J.W., Yokochi, C., 1983. Color atlas of anatomy, a photographic study of the human body. F K Schattauer, Stuttgart/Igaku-Shoin, Tokyo.
- Romer, A.S., 1959. A shorter version of the vertebrate body. W B Saunders, Philadelphia.
- Rost, C.C., Jacqueline, J., Kaiser, A., et al., 2004. Pelvic pain during pregnancy, a descriptive study of sign and symptoms of 870 patients in primary care. *Spine* 29 (22), 2567.
- Rothman, R.H., Simeone, F.A., 1975. *Spine*, vol. IV. W B Saunders, London.
- Rousseau, M.A., Bradford, D.S., Hadi, T. M., Pedersen, K.L., Lotz, J.C., 2006. The instant axis of rotation influences facet forces at L5-S1 during flexion/extension and lateral bending. *Eur. Spine J.* 15 (3), 299.
- Rowinski, M.J., 1985. Afferent neurobiology of the joint. In: Gould, J.A., Davies, J.D. (Eds.), *Orthopaedic and sports physical therapy*. C V Mosby, St Louis, p. 50.
- Sackett, D.L., Straus, S., Richardson, W.S., Rosenberg, R.B., 2000. Evidence-based medicine. How to practice and teach EBM. Elsevier Science, New York.
- Sahrmann, S., 2001. Diagnosis and treatment of movement impaired syndromes. Mosby, St Louis.
- Sahrmann, S.A., 1988. Diagnosis by the physical therapist – a prerequisite for treatment. *Phys. Ther.* 68 (11), 1703.
- Sakamoto, N., Yamashita, T., Minaki, Y., et al., 1999. Mechanoreceptors in the sacroiliac joint. *Trans. Orthop. Res. Soc.* 24, 988.
- Sapsford, R.R., Hodges, P.W., 2001. Contraction of the pelvic floor muscles during abdominal maneuvers. *Arch. Phys. Med. Rehabil.* 82, 1081.
- Sapsford, R.R., Hodges, P.W., Richardson, C.A., et al., 2001. Co-activation of the abdominal and pelvic floor muscles during voluntary exercises. *Neurourol. Urodyn.* 20, 31.
- Sapsford, R.R., Richardson, C.A., Maher, C.F., et al., 2008. Pelvic floor muscle activity in different sitting postures in continent and incontinent women. *Arch. Phys. Med. Rehabil.* 89, 1741.
- Sashin, D., 1930. A critical analysis of the anatomy and the pathologic changes of the sacro-iliac joints. *J. Bone Joint Surg.* 12, 891.
- Saunders, S., Rath, D., Hodges, P., 2004a. Postural and respiratory activation of the trunk muscles changes with mode and speed of locomotion. *Gait Posture* 20, 280.
- Saunders, S.W., Coppiters, M., Magarey, M., Hodges, P.W., 2004b. Low back pain and associated changes in abdominal muscle activation during human locomotion. In: *Australian conference of science and medicine in sport: hot topics from the red centre*. Sports Medicine, Alice Springs, Australia.
- Saunders, S., Schache, A., Rath, D., et al., 2005. Changes in three dimensional lumbo-pelvic kinematics and trunk muscle activity with speed and mode of locomotion. *Clin. Biomech.* 20, 784.
- Schleip, R., 2008. The nature of fascia: latest news from connective tissue research. DVD available at wwwinfo@fasciaresearch.com.
- Schleip, R., Klingler, W., Lehmann-Horn, F., 2005. Active fascial contractility: fascia may be able to contract in a smooth muscle-like manner and thereby influence musculoskeletal dynamics. *Med. Hypotheses* 65 (2), 273.
- Schunke, G.B., 1938. The anatomy and development of the sacro-iliac joint in man. *Anat. Rec.* 72, 313.
- Schwarzer, A.C., Aprill, C.N., Bogduk, N., 1995. The sacroiliac joint in chronic low back pain. *Spine* 20, 31.
- Shacklock, M., 2005. *Clinical neurodynamics*. Elsevier, Edinburgh.
- Shah, J.P., Phillips, T.M., Danoff, J.V., Gerber, L.H., 2005. An in vivo micro-analytical technique for measuring the local biochemical milieu of human skeletal muscle. *J. Appl. Physiol.* 99, 1980.

- Shibata, Y., Shirai, Y., Miyamoto, M., 2002. The aging process in the sacroiliac joint: helical computed tomography analysis. *J. Orthop. Sci.* 7 (1), 12.
- Shindle, M.K., Ranawat, A.S., Kelly, B. T., 2006. Diagnosis and management of traumatic and atraumatic hip instability in the athletic patient. *Clin. Sports Med.* 25, 309.
- Siebenrock, K.A., Schoeniger, R., Ganz, R., 2003. Anterior femoro-acetabular impingement due to acetabular retroversion. Treatment with periacetabular osteotomy. *J. Bone Joint Surg. Am.* 85-A (2), 278.
- Simons, D.G., Travell, J.G., Simons, L.S., 1999. Travell and Simons' myofascial pain and dysfunction: the trigger point manual, vol. 1, second ed. Williams & Wilkins, Baltimore, MD.
- Simons, D.G., Dommerholt, J., 2006. Myofascial trigger points and myofascial pain syndrome: a critical review of recent literature. *Journal of Manual and Manipulative Therapy* 14 (4), E124.
- Singleton, M.C., LeVeau, B.F., 1975. The hip joint: structure, stability, and stress. *Phys. Ther.* 55, 957.
- Sjodahl, J., Kvist, J., Gutke, A., Oberg, B., 2009. The postural response of the pelvic floor muscles during limb movements: a methodological electromyography study in parous women without lumbopelvic pain. *Clin. Biomech. (Bristol, Avon)* 24 (2), 183.
- Smidt, G.L., 1995. Sacroiliac kinematics for reciprocal straddle positions. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C. (Eds.), *Second interdisciplinary world congress on low back pain: the integrated function of the lumbar spine and sacroiliac joint*, part 2. San Diego, California, p. 695.
- Smith, M.D., Coppeters, M.W., Hodges, P.W., 2007a. Postural activity of the pelvic floor muscles is delayed during rapid arm movements in women with stress urinary incontinence. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 18 (8), 901.
- Smith, M.D., Coppeters, M.W., Hodges, P.W., 2007b. Postural response of the pelvic floor and abdominal muscles in women with and without incontinence. *Neurourol. Urodyn.* 26 (3), 377.
- Smith, M.D., Russell, A., Hodges, P.W., 2006. Disorders of breathing and continence have a stronger association with back pain than obesity and physical activity. *Aust. J. Physiother.* 52, 11.
- Smith, M.D., Russell, A., Hodges, P.W., 2008. Is there a relationship between parity, pregnancy, back pain and incontinence? *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 19 (2), 205.
- Snijders, C.J., Vleeming, A., Stoeckart, R., 1993a. Transfer of lumbosacral load to iliac bones and legs. 1: Biomechanics of self-bracing of the sacroiliac joints and its significance for treatment and exercise. *Clin. Biomech. (Bristol, Avon)* 8, 285.
- Snijders, C.J., Vleeming, A., Stoeckart, R., 1993b. Transfer of lumbosacral load to iliac bones and legs. 2: Loading of the sacroiliac joints when lifting in a stooped posture. *Clin. Biomech. (Bristol, Avon)* 8, 295.
- Soderberg, G.L., Barr, J.O., 1983. Muscular function in chronic low-back dysfunction. *Spine* 8, 79-85.
- Solonen, K.A., 1957. The sacro-iliac joint in the light of anatomical roentgenological and clinical studies. *Acta Orthop. Scand. Suppl.* 26.
- Spitznagle, T.M., Leong, F.C., Van Dillen, 2007. Prevalence of diastasis recti abdominis in a urogynecological patient population. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 18 (3), 321.
- Standring, S., 2008. *Gray's anatomy*, fortieth ed. Elsevier, Edinburgh.
- Stein, P.L., Rowe, B.M., 1982. *Physical anthropology*, third ed. McGraw-Hill, New York.
- Stokes, I.A.F., 1986. Three-dimensional biplanar radiography of the lumbar spine. In: Grieve, G.P. (Ed.), *Modern manual therapy of the vertebral column*. Churchill Livingstone, Edinburgh, p. 576.
- Stuge, B., Lærum, E., Kirkesola, G., Vøllestad, N., 2004. The efficacy of a treatment program focusing on specific stabilizing exercises for pelvic girdle pain after pregnancy. *Spine* 29 (4), 351.
- Sturesson, B., 1999. Load and movement of the sacroiliac joint. PhD thesis. Lund University, Sweden.
- Sturesson, B., Selvik, G., Uden, A., 1989. Movements of the sacroiliac joints: a Roentgen stereophotogrammetric analysis. *Spine* 14 (2), 162.
- Sturesson, B., Uden, A., Vleeming, A., 2000. A radiostereometric analysis of movements of the sacroiliac joints during the standing hip flexion test. *Spine* 25 (3), 364.
- Sunderland, S., 1978. Traumatized nerves, roots and ganglia: musculo-skeletal factors and neuropathological consequences. In: Korr, (Ed.), *The neurobiologic mechanisms in manipulative therapy*. Plenum Press, London, p. 137.
- Sung, P.S., Kang, Y., Pickar, J.G., 2005. Effect of spinal manipulation duration on low threshold mechanoreceptors in lumbar paraspinal muscles: a preliminary report. *Spine* 30 (1), 115.
- Swindler, D.R., Wood, C.D., 1982. *An atlas of primate gross anatomy: baboon, chimpanzee, and man*. Robert E Krieger, Florida.
- Tanzer, M., Noiseux, N., 2004. Osseous abnormalities and early osteoarthritis: the role of hip impingement. *Clin. Orthop. Relat. Res.* 170.
- Taylor, J.R., Twomey, L.T., 1986. Age changes in lumbar zygapophyseal joints: observations on structure and function. *Spine* 11 (7), 739.
- Taylor, J.T., Twomey, L.T., 1992. Structure and function of lumbar zygapophyseal (facet) joints: a review. *J. Orthop. Med.* 14 (3), 71.
- Taylor, J.T., Twomey, L.T., Corker, M., 1990. Bone and soft tissue injuries in post-mortem lumbar spines. *Paraplegia* 28, 119.
- Thind, P., Lose, G., Jorgensen, L., et al., 1991. Urethral pressure increment preceding and following bladder pressure elevation during stress episode in healthy and stress incontinent women. *Neurourol. Urodyn.* 10, 177.
- Thompson, J.A., O'sullivan, P.B., Briffa, N.K., et al., 2006. Altered muscle activation patterns in symptomatic women during pelvic floor muscle contraction and Valsalva manoeuvre. *Neurourol. Urodyn.* 25, 268.
- Tonniss, D., Heinecke, A., 1999. Decreased acetabular anteversion and femur neck anteversion cause pain and arthrosis. I: statistics and clinical sequelae. *Z. Orthop. Ihre Grenzgeb.* 137 (2), 153.
- Toronto, I.R., 1988. Resolution of back pain with the wide abdominal rectus plication abdominoplasty. *Plast. Reconstr. Surg.* 81 (5), 777.

- Torgerson, W.R., Dotter, W.E., 1976. Comparative roentgenographic study of the asymptomatic and symptomatic lumbar spine. *J. Bone Joint Surg.* 58A, 850.
- Torry, M.R., Schenker, M.L., Martin, H.D., et al., 2006. Neuromuscular hip biomechanics and pathology in the athlete. *Clin. Sports Med.* 25, 179.
- Trotter, M., 1937. Accessory sacro-iliac articulations. *Am. J. Phys. Anthropol.* 22, 247.
- Tsao, H., Hodges, P.W., 2007. Immediate changes in feedforward postural adjustments following voluntary motor training. *Exp. Brain Res.* 181 (4), 537.
- Tsao, H., Hodges, P.W., 2008. Persistence of improvements in postural strategies following motor control training in people with recurrent low back pain. *J. Electromyogr. Kinesiol.* 18 (4), 559.
- Tsao, H., Galea, M.P., Hodges, P.W., 2008. Reorganization of the motor cortex is associated with postural control deficits in recurrent low back pain. *Brain* 131 (8), 2161.
- Tuttle, R.H. (Ed.), 1975. *Primate functional morphology*. Mouton, The Hague.
- Twomey, L.T., Taylor, J.R., 1985. A quantitative study of the role of the posterior vertebral elements in sagittal movements of the lumbar vertebral column. In: Glasgow, E.F., Twomey, L.T., Scull, E.R., Kleynhans, A.M. (Eds.), *Aspects of manipulative therapy*, second ed. Churchill Livingstone, Melbourne, p. 34.
- Twomey, L.T., Taylor, J.R., Taylor, M.M., 1989. Unsuspected damage to lumbar zygapophyseal (facet) joints after motor-vehicle accidents. *Med. J. Aust.* 151, 210.
- Uhtoff, H.K., 1993. Prenatal development of the iliolumbar ligament. *J. Bone Joint Surg. Br.* 75, 93.
- Urquhart, D.M., Barker, P.J., Hodges, P.W., et al., 2005. Regional morphology of transversus abdominis and obliquus internus and externus abdominis. *Clin. Biomech. (Bristol, Avon)* 20 (3), 233.
- Urquhart, D.M., Hodges, P.W., 2007. Clinical anatomy of the anterolateral abdominal muscles. In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain*, second ed. Elsevier, Edinburgh, p. 75.
- van Dieen, J.H., 2007. Low-back pain and motor behavior: contingent adaptations, a common goal. In: *Proceedings from the Sixth Interdisciplinary World Congress on Low Back and Pelvic Pain*. Barcelona, November 7–10, p. 3.
- van Dieen, J.H., Cholewicki, J., Radebold, A., 2003a. Trunk muscle recruitment patterns in patients with low back pain enhance the stability of the lumbar spine. *Spine* 28, 834.
- van Dieen, J.H., de Looze, M.P., 1999. Directionality of anticipatory activation of trunk muscles in a lifting task depends on load knowledge. *Exp. Brain Res.* 128, 397.
- van Dieen, J.H., Selen, L.P.J., Cholewicki, J., 2003b. Trunk muscle activation in low-back pain patients, an analysis of the literature. *J. Electromyogr. Kinesiol.* 13, 333.
- van Wingerden, J.P., Vleeming, A., Snijders, C.J., et al., 1993. A functional-anatomical approach to the spine-pelvis mechanism: interaction between the biceps femoris muscle and the sacrotuberous ligament. *Eur. Spine J.* 2, 140.
- van Wingerden, J.P., Vleeming, A., Buyruk, H.M., et al., 2004. Stabilization of the sacroiliac joint in vivo: verification of muscular contribution to force closure of the pelvis. *Eur. Spine J.* 13 (3), 199.
- Verrall, G.M., Slovtine, J.P., Fon, G.T., 2001. Incidence of pubic bone marrow oedema in Australian rules football players: relation to groin pain. *Br. J. Sports Med.* 35, 28.
- Vicenzino, G., Twomey, L., 1993. Sideflexion induced lumbar spine conjunct rotation and its influencing factors. *Aust. Physiother.* 39 (4), 299.
- Vilensky, J.A., O'Connor, B.L., Fortin, J.D., et al., 2002. Histologic analysis of neural elements in the human sacroiliac joint. *Spine* 27 (11), 1202.
- Vincent-Smith, B., Gibbons, P., 1999. Inter-examiner and intra-examiner reliability of the standing flexion test. *Man. Ther.* 4 (2), 87.
- Vlaeyen, J.W.S., Linton, S.J., 2000. Fear-avoidance and its consequences in chronic musculoskeletal pain: a state of the art. *Pain* 85, 317.
- Vlaeyen, J.W.S., Vancleef, L.M.G., 2007. Behavioral analysis, fear of movement/ (re)injury, and cognitive-behavioral management of chronic low back pain. In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain*, second ed. Elsevier, Edinburgh, p. 475.
- Vleeming, A., Albert, H.B., Ostgaard, H.C., et al., 2007. European guidelines for the diagnosis and treatment of pelvic girdle pain. In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain*, second ed. Elsevier, Edinburgh, p. 465.
- Vleeming, A., Albert, H.B., Ostgaard, H.C., et al., 2008. European guidelines for the diagnosis and treatment of pelvic girdle pain. *Eur. Spine J.* 17 (6), 794.
- Vleeming, A., Buyruk, H., Stoeckart, R., et al., 1992a. An integrated therapy for peripartum pelvic instability: a study of the biomechanical effects of pelvic belts. *Am. J. Obstet. Gynecol.* 166 (4), 1243.
- Vleeming, A., de Vries, H.J., Mens, J.M., et al., 2002. Possible role of the long dorsal sacroiliac ligament in women with peripartum pelvic pain. *Acta Obstet. Gynecol. Scand.* 81 (5), 430.
- Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), 1997. *Movement, stability and low back pain, the essential role of the pelvis*. Churchill Livingstone, Edinburgh.
- Vleeming, A., Mooney, V., Snijders, C., et al., 1992b. First interdisciplinary world congress on low back pain and its relation to the sacroiliac joint. San Diego, California.
- Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), 2007. *Movement, stability and lumbopelvic pain*, second ed. Elsevier.
- Vleeming, A., Pool-Goudzwaard, A.L., Hammudoghlu, D., et al., 1996. The function of the long dorsal sacroiliac ligament: its implication for understanding low back pain. *Spine* 21 (5), 556.
- Vleeming, A., Pool-Goudzwaard, A.L., Stoeckart, R., et al., 1995a. The posterior layer of the thoracolumbar fascia: its function in load transfer from spine to legs. *Spine* 20, 753.
- Vleeming, A., Snijders, C.J., Stoeckart, R., et al., 1995b. A new light on low back pain. In: *Proceedings*

- from the 2nd interdisciplinary world congress on low back pain. San Diego, California.
- Vleeming, A., Stoeckart, R., 2007. The role of the pelvic girdle in coupling the spine and the legs: a clinical-anatomical perspective on pelvic stability. In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain*, second ed. Elsevier, Edinburgh, p. 113.
- Vleeming, A., Stoeckart, R., Snijders, C. J., 1989a. The sacrotuberous ligament: a conceptual approach to its dynamic role in stabilizing the sacroiliac joint. *Clin. Biomech. (Bristol, Avon)* 4, 201.
- Vleeming, A., Stoeckart, R., Volkers, A. C.W., Snijders, C.J., 1990a. Relation between form and function in the sacroiliac joint. 1: Clinical anatomical aspects. *Spine* 15 (2), 130.
- Vleeming, A., van Wingerden, J.P., Dijkstra, P.F., et al., 1992c. Mobility in the SI-joints in old people: a kinematic and radiologic study. *Clin. Biomech. (Bristol, Avon)* 7, 170.
- Vleeming, A., van Wingerden, J.P., Snijders, C.J., et al., 1989b. Load application to the sacrotuberous ligament: influences on sacroiliac joint mechanics. *Clin. Biomech. (Bristol, Avon)* 4, 204.
- Vleeming, A., Volkers, A.C.W., Snijders, C.J., Stoeckart, R., 1990b. Relation between form and function in the sacroiliac joint. 2: Biomechanical aspects. *Spine* 15 (2), 133.
- Vogt, L., Pfeifer, K., Banzer, W., 2003. Neuromuscular control of walking with chronic low-back pain. *Man. Ther.* 8, 21.
- Waddell, G., 2004. *The back pain revolution*, second ed. Churchill Livingstone, Edinburgh.
- Walheim, G.G., Selvik, G., 1984. Mobility of the pubic symphysis. *Clin. Orthop. Relat. Res.* 191, 129.
- Walker, J.M., 1984. Age changes in the sacroiliac joint. In: *Proceedings of the 5th International Federation of Orthopaedic Manipulative Therapists*, Vancouver, p. 250.
- Walker, J.M., 1986. Age-related differences in the human sacroiliac joint: a histological study; implications for therapy. *J. Orthop. Sports Phys. Ther.* 7, 325.
- Weisl, H., 1954. The articular surfaces of the sacro-iliac joint and their relation to the movements of the sacrum. *Acta Anat. (Basel)* 22, 1.
- Weisl, H., 1955. The movements of the sacro-iliac joint. *Acta Anat. (Basel)* 23, 80.
- White, A.A., Panjabi, M.M., 1978. The basic kinematics of the human spine. *Spine* 3, 12.
- WHO Constitution, 1978. www.who.int/governance/eb/constitution/en/index.html.
- Wilder, D.G., Pope, M.H., Frymoyer, J.W., 1980. The functional topography of the sacroiliac joint. *Spine* 5, 575.
- Willard, F.H., 1997. The muscular, ligamentous and neural structure of the low back and its relation to back pain. In: Vleeming, A., Mooney, V., Dorman, T., Snijders, C., Stoeckart, R. (Eds.), *Movement, stability and low back pain*. Churchill Livingstone, Edinburgh, p. 3.
- Willard, F.H., 2007. The muscular, ligamentous and neural structure of the low back and its relation to back pain. In: Vleeming, A., Mooney, V., Stoeckart, R. (Eds.), *Movement, stability and lumbopelvic pain*, second ed. Churchill Livingstone, Edinburgh, p. 5.
- Williams, P.L., 1995. *Gray's anatomy*, thirtyeighth ed. Churchill Livingstone, New York.
- Wilson, P.D., Herbison, P., Glazener, C., McGee, M., MacArthur, C., 2002. Obstetric practice and urinary incontinence 5-7 years after delivery. *ICS Proceedings Neurourology and Urodynamics* 21 (4), 284.
- Wright, A., 2002. Neurophysiology of pain and pain modulation. In: Strong, J., Unruh, M.A., Wright, A., Baxter, G.D. (Eds.), *Pain: a textbook for therapists*. Churchill Livingstone, Edinburgh.
- Wu, W.H., Meijer, O.G., Uegaki, K., et al., 2004. Pregnancy-related pelvic girdle pain (PPP), I: Terminology, clinical presentation, and prevalence. *Eur. Spine J.* 13 (7), 575.
- Wurdinger, S., Humbsch, K., Reichenback, J.R., et al., 2002. MRI of the pelvic ring joints postpartum: normal and pathological findings. *J. Magn. Reson. Imaging* 15 (3), 324.
- Wurff, P., Hagmeijer, R., Meyne, W., 2000. Clinical tests of the sacroiliac joint. A systematic methodological review: part 1: reliability. *Man. Ther.* 5 (1), 30.
- Wyke, B.D., 1981. The neurology of joints: a review of general principles. *Clin. Rheum. Dis.* 7, 223.
- Yahia, L., Rhalimi, S., Newman, N., Isler, M., 1992. Sensory innervation of human thoracolumbar fascia. An immunohistochemical study. *Acta Orthop. Scand.* 63 (2), 196.
- Yamamoto, I., Panjabi, M.M., Oxland, T.R., et al., 1990. The role of the iliolumbar ligament in the lumbosacral junction. *Spine* 15, 1138.
- Young, J., 1940. Relaxation of the pelvic joints in pregnancy: pelvic arthropathy of pregnancy. *J. Obstet. Gynecol.* 47, 493.
- Young, J.Z., 1981. *The life of vertebrates*, third ed. Clarendon Press, Oxford.