

Pubic Joint Dysfunction and Symphyseal Diastasis: A Novel Biomechanical and Treatment Model

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REFERENCES

- 1 Kharrazi FD, Rodgers WB, Kennedy John G, et al. (May 1997). Parturition-induced pelvic dislocation: a report of four cases. *J Ortho Trauma*. 11(4):277-81.
- 2 Berg G, Hammar M, Moller-Nielson J, et al. (1998) Low back pain during pregnancy. *Obstet Gynecol*. 71:71–76.
- 3 Depledge J, J McNair PJ, Keal-Smith C, et al. (2005) Management of Symphysis pubis dysfunction during pregnancy using exercise and pelvic support belts. *Phys Ther*. 85(12):1290-1300.
- 4 Depledge
- 5 Johnson L, Ommundsen M. (2011) Effective manual therapy intervention for pubic symphyseal pain in a post-partum patient: case study report. Poster and platform presentation at the 2011 International Pelvic Pain Association conference. October 2011, Las Vegas, NV.
- 6 <http://www.womenshealthapta.org/plp/tips/Web%20Tip%20%20-%20SI%20Joint%20protection.pdf> Accessed March 16, 2012.
- 7 Hesch J. (2011). "Sacral torsion about an oblique axis: a new approach to an old problem." In *Dynamic Body: Exploring Form, Expanding Function*. Oklahoma City: Freedom From Pain Institute, 190-231.
- 8 Greenman PE. (1989) *Principles of Manual Medicine*. Baltimore, MD: Williams & Wilkins; 88-93, 225-270.
- 9 Chaitow L. Personal communication. December 2011.
- 10 Mitchell F. Structural pelvic function. (1958) *Academy Applied Osteopathy*. 72-90.
- 11 Fryer G. (2011) Muscle energy technique: an evidence-informed approach. *Int J Osteopathic Med*, 14:3-9.

12 Beal MC. (1982) The sacroiliac problem: review of anatomy, mechanics and diagnosis. *JAOA* 81:73-85.

13 Jordan Theodore R. (2006) Conceptual and treatment models in osteopathy II. Sacroiliac mechanics revisited. *AAOJ* . 11-17.

14 Hesch J (Oct 2011). "Mechanical Pelvic Pain." International Pelvic Pain Society Annual Meeting. Las Vegas, NV.

15 Vleeming A, Albert HB, Östgaard HC, Sturesson B, et al.(2008) European guidelines for the diagnosis and treatment of pelvic girdle pain. *Eur Spine J.* 17(6): 794–819.

16 Hujbregts PA. (2008) Evidence-base diagnosis and treatment of the painful sacroiliac joint. *J Man Manip Ther.* 16(3): 153–154.

17 Arab AM, Abdollahi I, Joghataei MT, et al. Inter- and intra-examiner reliability of single and composites of selected motion palpation and pain provocation tests for sacroiliac joint. (2009) *Man Ther.* 14(2):213-21. Epub 2008 Mar 25.

18 Vleeming

19 Hujbregts

20 Hesch J. 2011 Mechanical.

21 Becker I, Woodley SJ, Stringer MD. (2010) The adult human pubic symphysis: a systematic review. *J Anat.* 217(5):475-87.

22 Alicioglu B, Kartal O, Gurbuz H, et al. (2008) Symphysis pubis distance in adults: a retrospective computed tomography study. *Surg Radial Anat* 30:153-157.

23 Hesch J (Oct 2011). "Evaluation and Treatment of Complex Mechanical Pelvic Pain." International Pelvic Pain Society Annual Meeting. Las Vegas, NV. 4-hour Workshop.

24 Hesch J. (1997). Evaluation and treatment of the most common pattern of sacroiliac joint dysfunction. In: *Movement, Stability & Low Back Pain: The Essential Role of the Pelvis.* Vleeming A, Mooney V, Dorman T, Snijders C, Stoeckart R, eds. London, United Kingdom: Churchill Livingstone, 535-552.

25 Hesch J. (2010 Nov 9-12). Poster presentation: Case Studies: Downslip Ilium with Paradoxical Upslip Ilium Appearance, Pudendal Neuropathy, Parainguinal Neuropathy; A New Internal Sensory Diagnostic Test. 7th Interdisciplinary World Congress on Low Back and Pelvic Pain. Los Angeles, CA.

26 Gardner MJ, Krieg JC, Simpson TS, Bottlang M. (Jan 2010). Displacement after simulated pelvic ring injuries: a cadaveric model of recoil. *J Trauma*, 68(1):159-165.

27 Suzuki T, Morgan SJ, Smith WR, Stahel PF, Flierl MA, Hak DJ. (Oct 2010). Stress radiograph to detect true extent of symphyseal disruption in presumed anteroposterior compression type I pelvic injuries. *J Trauma*. 69(4):880-5.

28 Sagi HC, Coniglione FM, Stanford JH. (Sep 2011). Examination under anesthetic for occult pelvic ring instability. *J Ortho Trauma*. 25(9):529-36.

29 Sagi

30 Gardner

31 Suzuki

32 Helfet DL, Lorich DG, Weiland AJ, et al. (Feb. 2012) "Chronic Pelvic Pain Following Childbirth." *New York Orthopedic Trauma Service*. Web, http://www.nyots.com/photos_childbirth.htm. Accessed February 22, 2012.

33 Garagiola DM, Tarver RD, Gibson L, Rogers RE, Wass JL. (Dec 1989). Anatomic changes in the pelvis after uncomplicated vaginal delivery: a CT study on 14 women. *AJR*.153:1239-1241.

34 Thornton DD. (May 2011). Pelvic ring fracture imaging. Web, <http://emedicine.medscape.com/article/394515-overview>. Accessed February 22, 2012.

35 Pennig D, Gladbach B, Majchrowski W. (1997). Disruption of the pelvic ring during spontaneous childbirth. *J Bone and Joint Surg*. 79(3):438-440.

36 Bechtel RD. (2001) Physical characteristics of the axial interosseous ligament of the human sacroiliac joint. *Spine J*. 1(4):255-9.

37 Krieg JC, Mohr M, Mirza AJ, et al. (2005) Pelvic circumferential compression in the presence of soft tissue injuries: a case report. *J Trauma*. 59;2:468-70.

38 Bottlang M, Simpson T, Sigg J, et al. (2002) Noninvasive reduction of open-book pelvic fractures by circumferential compression. *J Orth Traum*. 16(6):367-73.

39 Bottlang M, Krieg JC, Mohr M, et al. (2002) Emergent management of pelvic ring fractures with use of circumferential compression. *J Bone Joint Surg*. 84(2):43-7.

40 Pel JJM, Spoor CW, Goossens RHM, Pool-Goudzwaard AL. (2008). Biomechanical model study of pelvic belt influence on muscle and ligament forces. *J Biomechanics* 41(9):1878-1884.

41 Depledge. 2005

42 Kowalk DL, Perdue PS, Bourgeois FJ, et al. Disruption of the symphysis pubis during vaginal delivery. A case report. (1996) J Bone Joint Surg Am. 78(11):1746-8.

43 Bottlang. 2002

44 Bottlang. 2010.

45 Bonner TJ, Eardley WPG, Newell, N, et al. (2011) Accurate placement of a pelvic binder improves reduction of unstable fractures of the pelvic ring. J Bone Joint Surg Br. 93(11):1524-8.

46 Bonner

47 Vleeming A

48 Depledge

49 Bonner

50 Pel

51 Pennig 1997

52 Bottlang, Krieg 2002

53 Bottlang, Simpson 2002

54 Kowalk 1746, 1748.