

ESS3805

Biomechanical Analysis of Human Movement

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1

Sports Science - LibGuides at University of Exeter.
<http://libguides.exeter.ac.uk/SportsScienceHomePage>

2

Dixon S. The science and engineering of sport surfaces. London: : Routledge 2013.
<http://www.vlebooks.com/vleweb/product/openreader?id=Exeter&isbn=9781136479076>

3

Nigg BM, Herzog W. Biomechanics of the Musculo-Skeletal System. 3rd ed. Chichester, West Sussex, England: : John Wiley & Sons 2007.

4

Bartlett R. Introduction to Sports Biomechanics: Analysing Human Movement Patterns. 2nd edition. Abingdon: : Routledge 2007.
https://exeter.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991002275169707446&context=L&vid=44UOEX_INST:default

5

Bartlett R, Bussey M. Sports biomechanics: reducing injury risk and improving sports performance. 2nd ed. London: : Routledge 2012.
<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=451205>

6

Nigg BM, Herzog W. Chapter 3. Measuring Techniques [in] Biomechanics of the Musculo-Skeletal System. In: Biomechanics of the Musculo-Skeletal System. Chichester, West Sussex, England: : John Wiley & Sons 2007. 293-333.<https://contentstore.cla.co.uk/secure/link?id=c14c9fb3-0c5f-e611-80c6-005056af4099>

7

Bartlett R. Introduction to sports biomechanics: analysing human movement patterns. 2nd edition. Abingdon: : Routledge 2007. https://exeter.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991002275169707446&context=L&vid=44UOEX_INST:default

8

Cavanagh PR, LaFortune MA. Ground Reaction Forces in Distance Running [in] Journal of Biomechanics, Vol.13, No.5. Journal of Biomechanics 1980;**13**:397-406.<https://uoelibrary.idm.oclc.org/login?url=http://www.sciencedirect.com/science/article/pii/0021929080900330>

9

Miller DI. Chapter 8: Ground reaction forces in distance running [in] Biomechanics of Distance Running. In: Biomechanics of Distance Running. Champaign, IL: : Human Kinetics Books 1990. 203-24.<https://contentstore.cla.co.uk/secure/link?id=481344d2-9e5f-e611-80c6-005056af4099>

10

Bates BT, Osternig LR, Sawhill JA, et al. An assessment of subject variability, subject-shoe interaction, and the evaluation of running shoes using ground reaction force data [in] Journal of Biomechanics. Journal of Biomechanics 1983;**16**:181-91.<https://uoelibrary.idm.oclc.org/login?url=http://www.sciencedirect.com/science/article/pii/0021929083901252>

11

Bobbert, M F, Schamhardt HC, Nigg BM. Calculation of vertical ground reaction force estimates during running from positional data [in] Journal of Biomechanics. Journal of

1991;**24**

:1095–105.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPHS-610613&site=eds-live&scope=site>

12

Bobbert M F, Yeadon MR, Nigg BM. Mechanical analysis of the landing phase in heel-toe running (Analyse mecanique de la phase d'impact lors de la course avec appui sur le talon d'abord) [in] Journal of Biomechanics. Journal of 1992;**25**:223–34.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPHS-607983&site=eds-live&scope=site>

13

Hamill, Joseph, Russell E, Gruber A, et al. Impact characteristics in shod and barefoot running [in] Footwear Science. Footwear 2011;**3**:33–40.
doi:10.1080/19424280.2010.542187

14

Keller T, Weisberger A, Ray J, et al. Relationship between vertical ground reaction force and speed during walking, slow jogging, and running [in] Clinical Biomechanics. Clinical Biomechanics 1996;**11**:253–9.<https://uoelibrary.idm.oclc.org/login?url=http://www.sciencedirect.com/science/article/pii/S0268003395000682>

15

Nordin AD, Dufek JS, Mercer JA. Three-dimensional impact kinetics with foot-strike manipulations during running [in] Journal of Sport and Health Sciences. Journal of Sport and Health Science 2017;**6**:489–97.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edswss&AN=000418699400019&site=eds-live&scope=site>

16

Melvin R. Ramey. Force plate designs and applications [in] Exercise and sport sciences reviews. Exercise and sport sciences reviews 1975;**3**:303–19.<https://contentstore.cla.co.uk/secure/link?id=2c8886f8-1cf3-e811-80cd-005056af4099>

17

Andrew A Biewener, Full RJ. Force platform and kinematic analysis [in] Biomechanics: structures and systems : a practical approach. In: Biomechanics: structures and systems : a practical approach. Oxford: : IRL Press at Oxford University Press 1992. 45–73.<https://contentstore.cla.co.uk/secure/link?id=dee44f35-1cf3-e811-80cd-005056af4099>

18

Dainty DA, Norman RW. Standardizing biomechanical testing in sport. Human Kinetics 1987.

19

Melvin R. Ramey. Force plate designs and applications [in] Exercise and sport sciences reviews. Exercise and sport sciences reviews 1975;**3**:303–19.<https://contentstore.cla.co.uk/secure/link?id=2c8886f8-1cf3-e811-80cd-005056af4099>

20

Bates BT, Osternig LR, Sawhill JA, et al. An assessment of subject variability, subject-shoe interaction, and the evaluation of running shoes using ground reaction force data [in] Journal of Biomechanics. Journal of Biomechanics 1983;**16**:181–91.<https://uoelibrary.idm.oclc.org/login?url=http://www.sciencedirect.com/science/article/pii/0021929083901252>

21

Bobbert MF, Yeadon MR, Nigg BM. Mechanical Analysis of the Landing Phase in Heel-Toe Running [in] Journal of Biomechanics, Vol.25, No.3. Journal of Biomechanics 1992;**25**:223–34.<https://contentstore.cla.co.uk/secure/link?id=3b0708f2-83f1-e811-80cd-005056af4099>

22

Lafortune MA, Hennig EM, Lake MJ. Dominant role of interface over knee angle for cushioning impact loading and regulating initial leg stiffness [in] Journal of Biomechanics, Vol.29, No.12. Journal of Biomechanics 1996;**29**

:1523-9.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edo&AN=ejs10417339&site=eds-live&scope=site>

23

Nigg BM, Herzog W, Read LJ. Effect of viscoelastic shoe insoles on vertical impact forces in heel-toe running [in] *American Journal of Sports Medicine*, Vol.16, No.1. *The American Journal of Sports Medicine* 1988;**16**:70-6. doi:10.1177/036354658801600113

24

O'Leary K, Anderson Vorpahl K, Heiderscheidt B. Effect of Cushioned Insoles on Impact Forces During Running [in] *Journal of the American Podiatric Medical Association*, Vol.98, No.1. *Journal of the American Podiatric Medical Association*;**98**:36-41.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=amed&AN=0107349&site=eds-live&scope=site>

25

Denoth J. Load on the locomotor system and modelling [in] *Biomechanics of Running Shoes*. In: *Biomechanics of Running Shoes*. Champaign, IL: : Human Kinetics Publishers 1985. 63-116.<https://contentstore.cla.co.uk/secure/link?id=96a3aa7b-9f5f-e611-80c6-005056af4099>

26

Dixon SJ, Collop AC, Singleton TM, et al. Compensatory adjustments in lower extremity kinematics in response to a reduced cushioning of the impact interface in heel-toe running [in] *Sports Engineering*, Vol.8, No.1. *Sports Engineering* 2005;**8**.<https://uoelibrary.idm.oclc.org/login?url=http://link.springer.com/article/10.1007/BF02844131>

27

Dixon SJ, Waterworth C, Smith CV, et al. Biomechanical analysis of running in military boots with new and degraded insoles [in] *Medicine and Science in Sports and Exercise*, Vol.35, No.3. *Medicine and Science in Sports and Exercise* 2003;**35**:472-9.<https://contentstore.cla.co.uk/secure/link?id=ba2d5fa2-86f1-e811-80cd-005056af4099>

28

Hamill J, Russell EM, Gruber AH, et al. Impact characteristics in shod and barefoot running [in] Footwear Science, Vol.3, No.1. Footwear Science 2011;**3**:33–40.<https://uoelibrary.idm.oclc.org/login?url=http://www.tandfonline.com/doi/pdf/10.1080/19424280.2010.542187>

29

Lafortune MA, Lake MJ. Human pendulum approach to simulate and quantify locomotor impact loading [in] Journal of Biomechanics, Vol.28, No.9. Journal of Biomechanics 1995;**28**:1111–4.<https://uoelibrary.idm.oclc.org/login?url=http://www.sciencedirect.com/science/article/pii/002192909500002Y>

30

Lieberman DE, Venkadesan M, Werbel WA, et al. Foot strike patterns and collision forces in habitually barefoot versus shod runners [in] Nature, Vol.463, No.7280. Nature 2010;**463**:531–5.<http://www.nature.com/nature/journal/v463/n7280/full/nature08723.html>

31

Nigg B. Biomechanical considerations on barefoot movement and barefoot shoe concepts [in] Footwear Science, Vol.1, No.2. Footwear Science 2009;**1**:73–9.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=asx&AN=45483918&site=eds-live&scope=site>

32

Shorten M, Mientjes MIV. The 'heel impact' force peak during running is neither 'heel' nor 'impact' and does not quantify shoe cushioning effects [in] Footwear Science, Vol.3, No.1. Footwear Science 2011;**3**:41–58.<https://uoelibrary.idm.oclc.org/login?url=http://www.tandfonline.com/doi/abs/10.1080/19424280.2010.542186>

33

Bates BT, Dufek JS, Davies HP. The effect of trial size on statistical power [in] Medicine and Science in Sports and Exercise, Vol.24, No.9. Medicine and Science in Sports and Exercise 1992;**24**:1059–68.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edsovi&AN=edsovi.00005768.199209000.00017&site=ed>

s-live&scope=site

34

Bates BT, Osternig LR, Sawhill JA, et al. An assessment of subject variability, subject-shoe interaction, and the evaluation of running shoes using ground reaction force data [in] *Journal of Biomechanics*, Vol.16, No.3. *Journal of Biomechanics* 1983;**16**:181-91. doi:10.1016/0021-9290(83)90125-2

35

Bobbert MF, Yeadon MR, Nigg BM. Mechanical Analysis of the Landing Phase in Heel-Toe Running [in] *Journal of Biomechanics*, Vol.25, No.3. *Journal of Biomechanics* 1992;**25**:223-34. <https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edselp&AN=0021929092900225&site=eds-live&scope=site>

36

Brown RP. Performance tests for artificial sports surfaces [in] *Polymer Testing*, Vol.7, No.4. *Polymer Testing* 1987;**7**:279-92. <https://uoelibrary.idm.oclc.org/login?url=http://www.sciencedirect.com/science/article/pii/0142941887900249>

37

Coyles VR, Lake MJ, Patrilli BL. Comparative evaluation of soccer boot traction during cutting manoeuvres: methodological considerations for field testing [in] *Engineering of Sport*. In: *The Engineering of Sport*. Cambridge: : Blackwell Science Ltd 1998. 183-90. <https://contentstore.cla.co.uk/secure/link?id=176370ca-af5f-e611-80c6-005056af4099>

38

Dixon SJ, Batt ME, Collop AC. Artificial playing surfaces research: a review of medical, engineering and biomechanical aspects [in] *International Journal of Sports Medicine*, Vol.20, No.4. *International Journal of Sports Medicine* 1999;**20**:209-18. doi:10.1055/s-2007-971119

39

Dixon SJ, Stiles VH. Impact absorption of tennis shoe-surface combinations [in] Sports Engineering, Vol.6, No.1. Sports Engineering 2003;**6**
:1-9.<http://link.springer.com/article/10.1007/BF02844155>

40

Hamill J, van Emmerik REA, Heiderscheit BC, et al. A dynamical systems approach to lower extremity running injuries [in] Clinical Biomechanics, Vol.14, No.5. Clinical Biomechanics 1999;**14**
:297-308.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=amed&AN=0005724&site=eds-live&scope=site>

41

Hennig EM, Valiant GA, Liu Q. Biomechanical variables and the perception of cushioning for running in various types of footwear [in] Journal of applied biomechanics, Vol.12. Journal of applied biomechanics 1996;**12**
:143-50.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=20751612&site=eds-live&scope=site>

42

James CR. Effects of injury proneness and task difficulty on joint kinetic variability [in] Medicine and science in sports and exercise, Vol.32, No.11. Medicine and science in sports and exercise 2000;**32**
:1833-44.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPHS-666326&site=eds-live&scope=site>

43

Lafortune MA. New approach to assess in vivo rearfoot control of court footwear during sidestepping moves [in] Journal of applied biomechanics, Vol.13, No.2. Journal of applied biomechanics 1997;**13**
:197-204.<https://contentstore.cla.co.uk/secure/link?id=7321e665-1bf3-e811-80cd-005056af4099>

44

Messier SP, Pittala KA. Etiologic factors associated with selected running injuries [in] Medicine and science in sports and exercise, Vol.20, No.5. Medicine and science in sports and exercise 1988;**20**

:501-5.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPH230288&site=eds-live&scope=site>

45

Miller DI. Chapter 8. Ground reaction forces in distance running [in] Biomechanics of Distance Running. In: Biomechanics of Distance Running. Champaign, IL: : Human Kinetics Books 1990.
203-23.<https://contentstore.cla.co.uk/secure/link?id=481344d2-9e5f-e611-80c6-005056af4099>

46

Nigg BM. Biomechanics of Running Shoes. Champaign, IL: : Human Kinetics Publishers 1985.

47

Nigg BM, Yeadon MR. Biomechanical aspects of playing surfaces [in] Journal of Sports Sciences, Vol.5. Journal of Sports Sciences 1987;**5**
:117-45.<https://uoelibrary.idm.oclc.org/login?url=http://www.tandfonline.com/doi/abs/10.1080/02640418708729771>

48

Nigg BM, Stefanyshyn DJ, Cole GK. Sport surfaces: biomechanics, injuries, performance, testing, installation. Calgary: : University Of Calgary, Human Performance Laboratory 2003.

49

Stiles VH, Dixon SJ. The biomechanical assessment of tennis surface cushioning properties during a tennis specific movement (long abstract). International Society of Biomechanics XIXth Congress.
2003.https://isbweb.org/images/conf/2003/html/_longAbstractsByAuthor.html

50

Stiles VH, Dixon SJ. The influence of different playing surfaces on the biomechanics of a tennis running forehand foot plant [in] Journal of Applied Biomechanics, Vol.22. Journal of

Applied Biomechanics 2006;**22**

:14–24.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=19420344&site=eds-live&scope=site>

51

Stiles V, Dixon S. Biomechanical response to systematic changes in impact interface cushioning properties while performing a tennis-specific movement [in] Journal of Sports Sciences, Vol.25, No.11. Journal of Sports Sciences 2007;**25**

:1229–39.<https://uoelibrary.idm.oclc.org/login?url=http://www.tandfonline.com/doi/abs/10.1080/02640410600983616>

52

Subotnick SI. The biomechanics of running: implications for the prevention of foot injuries [in] Sports Medicine, Vol.2. Sports Medicine 1985;**2**

:144–53.<https://uoelibrary.idm.oclc.org/login?url=http://link.springer.com/article/10.2165/00007256-198502020-00006>

53

Stiles VH. Biomechanical Response to Changes in Natural Turf during Running and Turning [in] Journal of Applied Biomechanics, Vol.27, No.1. Journal of Applied Biomechanics 2011;**27**

:54–63.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=59560459&site=eds-live&scope=site>

54

Stiles VH, James IT, Dixon SJ, et al. Natural Turf Surfaces [in] Sports Medicine, Vol.39, No.1. Sports Medicine 2009;**39**

:65–84.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=37709635&site=eds-live&scope=site>

55

Milani TL, Schnabel G, Hennig EM. Rearfoot motion and pressure distribution patterns during running in shoes with varus and valgus wedges [in] Journal of Applied Biomechanics, Vol.11. Journal of Applied Biomechanics 1995;**11**

:177–87.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=20725400&site=eds-live&scope=site>

56

Nigg BM. Pressure Distribution [in] Biomechanics of the Musculo-Skeletal System. In: Biomechanics of the Musculo-Skeletal System. Chichester, West Sussex, England: : John Wiley & Sons 2007.
334-42.<https://contentstore.cla.co.uk/secure/link?id=4989093b-9d60-e611-80c6-005056af4099>

57

Windle CM, Gregory SM, Dixon SJ. The shock attenuation characteristics of four different insoles when worn in a military boot during running and marching [in] Gait & Posture, Vol.9, No.1. Gait & Posture 1999;**9**
:31-7.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPHS-784620&site=eds-live&scope=site>

58

Bartlett R. Chapter 5: 'Causes of movement - forces and torques' [in] Introduction to Sports Biomechanics. In: Introduction to Sports Biomechanics: Analysing Human Movement Patterns. Abingdon: : Routledge 2007.
213-20.<http://lib.myilibrary.com/browse/open.asp?id=106182&entityid=https://elibrary.exeter.ac.uk/idp/shibboleth>

59

Cavanagh PR, LaFortune MA. Ground reaction forces in distance running [in] Journal of Biomechanics, Vol.13, No.5. Journal of Biomechanics 1980;**13**
:397-406.<https://uoelibrary.idm.oclc.org/login?url=http://www.sciencedirect.com/science/article/pii/0021929080900330>

60

Dixon SJ, Waterworth C, Smith CV, et al. Biomechanical analysis of running in military boots with new and degraded insoles [in] Medicine and Science in Sports and Exercise, Vol.35, No.3. Medicine and Science in Sports and Exercise 2003;**35**
:472-9.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPHS-873160&site=eds-live&scope=site>

61

Dixon SJ. Application of center-of-pressure data to indicate rearfoot inversion-eversion in shod running [in] Journal of the American Podiatric Medical Association, Vol.96, No.4. Journal of the American Podiatric Medical Association 2006;**96**:305-12.<https://uoelibrary.idm.oclc.org/login?url=http://www.japmaonline.org/doi/full/10.7547/0960305>

62

Dixon SJ, McNally K. Influence of orthotic devices prescribed using pressure data on lower extremity kinematics and pressures beneath the shoe during running [in] Clinical Biomechanics, Vol.23, No.5. Clinical Biomechanics 2008;**23**:593-600.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edselp&AN=S0268003308000296&site=eds-live&scope=site>

63

Fong DT-P, Chan Y-Y, Hong Y, et al. A three-pressure-sensor (3PS) system for monitoring ankle supination torque during sport motions [in] Journal of Biomechanics, Vol.41, No.11. Journal of Biomechanics 2008;**41**:2562-6.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=33529918&site=eds-live&scope=site>

64

Low DC, Dixon SJ. Footscan pressure insoles: accuracy and reliability of force and pressure measurements in running [in] Gait & Posture, Vol.32, No.4. Gait & Posture 2010;**32**:664-6.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=55057093&site=eds-live&scope=site>

65

Tessutti V, Trombini-Souza F, Ribeiro AP, et al. In-shoe plantar pressure distribution during running on natural grass and asphalt in recreational runners [in] Journal of Science and Medicine in Sport, Vol.13, No.1. Journal of Science and Medicine in Sport 2010;**13**:151-5.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=47113632&site=eds-live&scope=site>

66

Nigg BM, Herzog W. Biomechanics of the Musculo-Skeletal System. 3rd ed. Chichester, West Sussex, England: : John Wiley & Sons 2007.

67

Hamill J, Knutzen KM. Chapter 12. Types of Mechanical Analysis [in] Biomechanical basis of human movement. In: Biomechanical basis of human movement. Malvern, Pa: : Williams & Wilkins 1995.

458-68.<https://contentstore.cla.co.uk/secure/link?id=67265f29-9e60-e611-80c6-005056af4099>

68

Winter DA. Overall principle of lower limb support during stance phase of gait [in] Journal of Biomechanics, Vol.13, No.11. Journal of Biomechanics 1980;**13**:923-7.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPH196667&site=eds-live&scope=site>

69

Winter DA. Moments of force and mechanical power in jogging [in] Journal of Biomechanics, Vol.16, No.1. Journal of Biomechanics 1983;**16**:91-7.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPH174380&site=eds-live&scope=site>

70

Simpson KJ, Bates BT. The effects of running speed on lower extremity joint moments generated during the support phase [in] International Journal of Sport Biomechanics, Vol.6. International Journal of Sport Biomechanics 1990;**6**:309-24.

71

Alexander RMcN, Vernon A. The dimensions of knee and ankle muscles and the forces they exert [in] Journal of Human Movement Studies, Vol.1. Journal of Human Movement Studies 1975;**1**

:115-23.<https://contentstore.cla.co.uk/secure/link?id=32437f6e-9d3c-e711-80cb-005056af4099>

72

Burdett RG. Forces predicted at the ankle during running [in] Medicine and Science in Sports and Exercise, Vol.14. Medicine and Science in Sports and Exercise 1982;**14**

:308-16. <https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPH119686&site=eds-live&scope=site>

73

Kerwin DG, Dixon SJ. The influence of heel lift manipulation on Achilles tendon loading in running [in] *Journal of Applied Biomechanics*, Vol.14. *Journal of Applied Biomechanics* 1998;**14**

:374-89. <https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=6139359&site=eds-live&scope=site>

74

Dixon SJ, Kerwin DG. Variations in Achilles tendon loading with heel lift intervention in heel-toe runners [in] *Journal of Applied Biomechanics*, Vol.18. *Journal of Applied Biomechanics* 2002;**18**

:321-31. <https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=8503245&site=eds-live&scope=site>

75

Nigg BM, Herzog (eds) W. *Biomechanics of the Musculo-Skeletal System*. 2nd ed. Chichester: : Wiley 1999.

76

Komi PV. Relevance of in vivo force measurements to human biomechanics [in] *Journal of Biomechanics*, Vol.23. *Journal of Biomechanics* 1990;**23**

:23-34. <https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPHS-598468&site=eds-live&scope=site>

77

Lichtwark GA, Wilson AM. Interactions between the human gastrocnemius muscle and the Achilles tendon during incline, level and decline locomotion [in] *Journal of Experimental Biology*, Vol.209, No.21. *Journal of Experimental Biology* 2006;**209**:4379-88.
doi:10.1242/jeb.02434

78

Reinschmidt C, Nigg BM. The influence of heel height on ankle joint moments in running [in] *Medicine and Science in Sports and Exercise*, Vol.27. *Medicine and Science in Sports and Exercise* 1995;**27**:410–92.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPH373370&site=eds-live&scope=site>

79

Rugg SG, Gregor RJ, Mandelbaum BR, et al. In vivo moment arm calculations at the ankle using magnetic resonance imaging (MRI) [in] *Journal of Biomechanics*, Vol.23, No.5. *Journal of Biomechanics* 1990;**23**:495–501.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edselp&AN=002192909090305M&site=eds-live&scope=site>

80

Scott SH, Winter DA. Internal forces at chronic running injury sites [in] *Medicine and Science in Sports and Exercise*, Vol.22. *Medicine and Science in Sports and Exercise* 1990;**22**:357–69.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPH259753&site=eds-live&scope=site>

81

Alexander RMcN. Storage and release of elastic energy in the locomotor system and the stretchshortening cycle [in] *Biomechanics and Biology of Movement*. In: *Biomechanics and Biology of Movement*. Champaign, Ill: : Human Kinetics 2000. 19–29.<https://contentstore.cla.co.uk/secure/link?id=0ddaf5d6-a05f-e611-80c6-005056af4099>

82

Butler RJ, Crowell HP, Davis IM. Lower extremity stiffness: implications for performance and injury [in] *Clinical Biomechanics*, Vol.18, No.6. *Clinical Biomechanics* 2003;**18**:511–7.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edsovi&AN=edsovi.00009043.200307000.00008&site=eds-live&scope=site>

83

Coyles VR, Lake MJ, Lees A. Dynamic angular stiffness of the knee and ankle during

barefoot and shod running [in] Proceedings of the 5th Symposium on Footwear Biomechanics. In: Proceedings of the 5th Symposium on Footwear Biomechanics. Zurich: : Dept. of Minerals, ETH Zurich 2001. 26–7.

84

Farley CT, Glasheen J, McMahon TA. Running springs: speed and animal size [in] Journal of Experimental Biology, Vol.185. Journal of Experimental Biology 1993;**185**:71–86.

85

Farley CT, González O. Leg stiffness and stride frequency in human running [in] Journal of Biomechanics, Vol.29, No.2. Journal of Biomechanics 1996;**29**:181–6.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPH411975&site=eds-live&scope=site>

86

Farley CT, Houdijk HHP, Van Strien C, et al. Mechanism of leg stiffness adjustment for hopping on surfaces of different stiffnesses [in] Journal of Applied Physiology, Vol.85, No.3. Journal of Applied Physiology 1998;**85**:1044–55.<http://jap.physiology.org/content/85/3/1044>

87

Farley CT, Morgenroth DC. Leg stiffness primarily depends on ankle stiffness during human hopping [in] Journal of Biomechanics, Vol.32, No.3. Journal of Biomechanics 1999;**32**:267–73.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPHS-637675&site=eds-live&scope=site>

88

Ferris DP, Farley CT. Interaction of leg stiffness and surface stiffness during human hopping [in] Journal of Applied Physiology, Vol.82, No.1. Journal of Applied Physiology 1997;**82**:15–22.<http://jap.physiology.org/content/82/1/15>

89

Ferris DP, Farley CT, Louie M. Running in the real world: adjusting leg stiffness for different surfaces [in] Proceedings of the Royal Society: Biological Sciences, Vol.265, No.1400.

Proceedings of the Royal Society: Biological Sciences 1998;**265**
:989-94.https://uoelibrary.idm.oclc.org/login?url=http://www.jstor.org/stable/51029?seq=1#page_scan_tab_contents

90

Ferris DP, Liang K, Farley CT. Runners adjust leg stiffness for their first step on a new running surface [in] Journal of Biomechanics, Vol.32, No.8. Journal of Biomechanics 1999;
32
:787-94.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edselp&AN=S0021929099000780&site=eds-live&scope=site>

91

Kuitunen S, Komi PV, Kyrolainen H. Knee and ankle joint stiffness in sprint running [in] Medicine and Science in Sports and Exercise, Vol.34, No.1. Medicine and Science in Sports and Exercise 2002;**34**
:166-73.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sph&AN=SPHS-801411&site=eds-live&scope=site>

92

Lafortune MA, Hennig EM, Lake MJ. Dominant role of interface over knee angle for cushioning impact loading and regulating initial leg stiffness [in] Journal of Biomechanics, Vol.29, No.12. Journal of Biomechanics 1996;**29**
:1523-9.<https://uoelibrary.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edo&AN=ejs10417339&site=eds-live&scope=site>

93

McMahon TA, Greene PR. The Influence of Track Compliance on Running [in] Sport Shoes and Playing Surfaces: Biomechanical Properties. In: Sport Shoes and Playing Surfaces: Biomechanical Properties. Champaign, IL: : Human Kinetics 1984.
138-62.<https://contentstore.cla.co.uk/secure/link?id=57288137-a35f-e611-80c6-005056af4099>

94

Walker C, Blair R. An experimental review of the McMahon/Cheng model of running [in] Sports Engineering, Vol.4, No.3. Sports Engineering 2001;**4**:113-21.
doi:10.1046/j.1460-2687.2001.00075.x