

## 参考文献

阿江通良, 宮下 憲, 横井孝志, 大木昭一郎, 渋川侃二 (1986) 機械的パワーからみた疾走における下肢筋群の機能および貢献度. 筑波大学体育科学系紀要 9 : 229-239.

阿江通良 (1996) 日本人幼少年およびアスリートの身体部分慣性特性. Jpn. J. Sport Sci. 15 : 155-162.

Alexander, N. J. L. (1989) The relationship between muscle strength and sprint kinematics in elite sprinters. Can. J. Sports Sci. 14 : 148-157.

Arampatzis, A., Schade, F., Walsh, M. and Bruggenmann, G. P. (2001) Influence of leg stiffness and its effect on myodynamic jumping performance. J. Electromyogr. Kinesiol. 11 : 355-364.

Asmussen, E. and Bonde-peterson, F. (1974) Storage of elastic energy in skeletal muscle in man. Acta Physiol. Scand. 91 : 385-392.

馬場崇豪, 和田幸洋, 伊藤章 (2000) 短距離走の筋活動様式. 体育学研究 45: 200-186.

Basmajian, J. V. and De Luca, C. J. (1985) Muscle alive. Their function revealed by electromyography. 4th ed. Williams & Wilkins: Baltimore, pp.252-264.

Bloomfield, J. (1998) Training in sports. Applying sports science. Posture and proportionality in sports. John Wiley & Sons Inc.: New York, pp.145-188.

Bobbert, M. F., Huijing, P. A. and Ingen Schenau, G. J. van. (1987a) Drop jumping I . The influence of jumping technique on the biomechanics of jumping. Med. Sci. Sports Exerc. 19 : 332-338.

Bobbert, M. F., Huijing, P. A. and Ingen Schenau, G. J. van. (1987b) Drop jumping II . The influence of dropping height on the biomechanics of drop jump. Med. Sci. Sports Exerc. 19: 339-346.

Bobbert, M.F., and Ingen Schenau, G.J. Van. (1988) Coordination of vertical jumping. J. Biomech. 21: 241-262.

Burke, E. R., Cerny, F., Costill, D. and Fink, W. (1977) Characteristics of skeletal muscle in competitive cyclist. Med. Sci. Sports Exerc. 9: 109-112.

Cavagna, G. (1977) Storage and utilization of elastic energy in skeletal muscle. Exerc. Sports Sci. Rev. 5 : 89-129.

Dowson, M. N., Nevill, M. E., Lakomy, H. K. A., Nevil, A. E. and Hazeldine, R. J. (1998) Modeling the relationship between isokinetics muscle strength and performance. J. Sports Med. 16 : 257-265.

Ericson, M. O., Nisell, R., Arborelius, U. P. and Ekholm, J. (1985) Muscular activity during ergometer cycling. Scand. J. Rehab. Med. 17: 53-61.

Evans, J. A. and Quinney, A. H. (1981) Determination of resistance settings for anaerobic power

testing. Can. J. Appl. Sports Sci. 6: 53-56.

Faria, I. E., and Cavanagh, P. R. (1978) The physiology and biomechanics of cycling. John Wiley & Sons, Inc.: New York, Pp.39-46.

Farrar, M. and Thorland, M. (1987) Relationship between isokinetics strength and sprint times in college-age men. J. Sports Med. Phys. Fitness. 27 : 368-372.

深代千之, 若山章信, 原田康弘 (1991) トップアスリートの体力とパフォーマンス, 一陸上・短距離選手についてー. 体育の科学 41 : 262-268.

Franklin, M. E., Chenier, T. C., Brauninger, L., Cook, H. and Harris, S. (1995) Effect of positive heel inclination on posture. J. Orthop. Sports Phys. Ther. 12 : 94-99.

Frigo, C. and Pedotti, A. (1978) Determination of muscle length during locomotion. I In Biomechanics VI-A (Edited by Asmussen, E. and Jorgensen, K), University Park press ; Baltimore. pp. 355-360.

Gonzalez, H. and Hull, M. L. (1989) Multivariable optimization of cycling biomechanics., J. Biomech. 22: 1151-1161.

Graves, J. E., Webh, D. C., Pollock, M. L., Matkozich, J., Leggett, S. H., Carpenter, D. M., Foster D. N. and Ciralli, J. (1994) Pelvis stabilization during resistance training : its effect on the development of lumbar extension. Arch. Phys. Med. Rehabil. 75: 210-215.

Gregoire, L., Veeger, H. E., Huijing, P. A. and Ingen Schenau, G. J. van, (1984) Role of mono and biarticular muscles in explosive movements. *Int. J. Sports Med.* 5: 301-305.

Gregor, R. and J. Rugg, S. G. (1985) Effects of saddle height and pedaling cadence on power output and efficiency. *Science of cycling*. Human Kinetics: Champaign, pp.69-90.

Grieve, D. W., Pheasant, S. and Cavanagh, P. R. (1978) Prediction of gastrocnemius length from knee and ankle posture. In *Biomechanics VI-A* (Edited by Asmussen, E. and Jorgensen, K), University Park press ; Baltimore, pp. 405-412.

Guskiewicz, K., Lephart, S. and Burkholder, R. (1993) The relationship between sprint speed and flexion / extension strength in collegiate athletes. *Isokinetics Exerc. Sci.* 3 : 111-116.

Hamly, E. J. and Thomas, V. (1967) Physiological and postural factors in the calibration of the bicycle ergometer. *J. Physiol.* 191 : 55-57.

Hay, J.G., Thorson, E.M. and Christina Kippenhan, B. (1999) Change in muscle-tendon length during the take-off of a running long jump. *J. Sports Sci.* 17: 159-172.

Hayama, S. and Nakatsukasa, M. (1992) Monkey performance: The development of bipedalism in trained Japanese monkeys. *Acta. Anat. Nipponica.* 67 : 169-185.

Hawkins, D. and Hull, M. L. (1990) A method for determining lower extremity muscle-tendon lengths during flexion/extension movements. *J. Biomech.* 23 : 487-494.

Heino, J. G., Godges, J. J. and Carter, C. L. (1990) Relationship between hip extension range of motion and postural alignment. *J. Orthop. Sports Phys. Ther.* 12 : 243-247.

Houtz, S. J. and Fischer, F. J. (1959) An analysis of muscle action and joint excursion during exercise on a stationary bicycle. *J. Bone Joint Surg.* 41: 123-131.

飯千明, 阿江通良, 宮下 憲, 末松政治 (1990) スタートダッシュフォームと肉離れのバイオメカニクス的研究. *体育学研究* 34: 359-372.

Iiboshi, A., Oomura, I., Yamashita, T., Suenaga, M., and Torimaru, T. (1995) A case study of a biomechanical approach to hamstring muscle strain. In *Biomechanics XV* (edited by Hakkinen, K.), University of Jyvaskyla: Finland, pp. 416-417.

伊藤 章, 斎藤昌久, 佐川和則, 加藤謙一 (1992) ルイス, バレルと日本トップ選手のキックフォーム. *Jpn. J. Sports Sci.* 11 : 604-608.

伊藤 章, 市川博啓, 斎藤昌久, 佐川和則, 伊藤道郎, 小林寛道 (1998) 100m中間疾走局面における疾走動作と速度との関係. *体育学研究* 43 : 260-273.

Jacobs, R., Bobbert, M. F. and Ingen Schenau, G.J. Van. (1993) Function of mono-and biarticular muscles in running. *Med. Sci. sports Exerc.* 25: 1163-1173.

Jacobs, R., Bobbert, M.F. and Ingen Schenau, G.J. Van, (1996) Mechanical output from individual muscles during explosive leg extensions : the role of biarticular muscles. *J. Biomech.* 29: 513-523.

Jacobs, R. and Ingen Schenau, G.J. Van, (1992) Intermuscular coordination in a sprint push-off. J. Biomech. 25: 953-965.

Johnson, M. D. and Buckley, J. G. (2001) Muscle power patterns in the midacceleration phase of sprinting. J. Sports Sci. 19: 263-272.

カレ：長島聖司，岩堀修明訳（2003）分冊 解剖学アトラス3. 神経系と感覺器. 第5版.  
分光堂：東京。

Kawakami, Y., Muraoka, T., Ito, S., Kanehisa, H. and Fukunaga, T. (2002) In vivo muscle fiber behaviour during counter-movement exercise in humans reveals a significant role for tendon elasticity. J. Physiol. 540 : 635-646.

Kerrigan, D. C., Todd, M. K. and Della, Croce, U. (1986) Gender differences in joint biomechanics during walking: normative study in young adults. Am. J. Phys. Med. Rehabil. 77 : 2-7.

木越清信，田内健二，尾縣 貢，大山圭悟，高松 薫（2003）短時間の全力自転車ペダリング運動における座位姿勢の相違が筋活動および最大パワーに及ぼす影響. 体力科学 52 : 167-178.

木越清信，岩井浩一，島田一志，尾縣 貢（2004）ドロップジャンプにおける姿勢が下肢関節 Kinetics およびジャンプパフォーマンスに及ぼす影響. 体育学研究 49: 435-445.

Komi, P. V. and C. Bosco. (1978) Utilization of stored elastic energy in leg extensor muscle by men

and women. Med. Sci. Sports Exerc. 10 : 261-265.

Komi, P. V. and Buskirk, E. R. (1972) Effect of eccentric and concentric muscle conditioning on tension and electrical activity of human muscle. Ergonomics. 15 : 427-434.

窪 康之 (2003) 大きなパワー発揮が要求される全身運動の練習効果. 一立幅跳の踏切動作を例にしてー バイオメカニクス研究 7 : 325-333.

Kyrolainen, H. and Komi, P. V. (1995) The function of neuromuscular system in maximal stretch-shortening cycle exercises: comparison between power and endurance-trained athletes. J. Electromyogr. Kinesiol. 5 : 15-25.

Levine, D. and Whittle, M. W. (1996) The effects of pelvic movement on lumbar lordosis in the standing position. J. Orthop. Sports Phys. Ther. 24 : 130-135.

Lippolt, O. C. J. (1952) The relationship between integrated action potentials in human muscle and its isometric tension. J. physiol. 117: 492.

Lundin, P. (1985) A review of plyometric training. NSCA Journal. 3 : 69-74.

Melvill – Jones, G. and Watt, D. G. D. (1971) Muscular control of landing from unexpected falls in man. J. Physiol. 219 : 729-737.

Montgomery, II , William, H., Pink, M. and Perry, J. (1994) Electromyographic analysis of hip and knee musculature during running. Am. J. Sports Med. 22 : 272-278.

村木征人, 稲岡純史 (1996) 跳躍運動における主観的強度（努力度合）と客観的出力との対応関係. スポーツ方法学研究 9 : 73-79.

中村隆一, 斎藤宏 (1992) 基礎運動学. 第4版. 医歯薬出版株式会社：東京. pp. 269-301.

Nemeth, G. and Ohlsen, H. (1985) In vivo moment arm lengths for hip flexor muscles at different angles of hip flexion. J. Biomech. 18 : 129-140.

Nordeen-Snyder, K. S. (1977) The effect of bicycle seat height variation upon oxygen consumption and lower limb kinematics. Med. Sci. Sports. Exerc. 9 : 113-117.

Oddsson, L. and Thorstensson, A. (1986) Fast voluntary trunk flexion movements in standing: primary movements and associated postural adjustments. Acta. Physiol. Scand. 128 : 341-349.

尾縣 貢, 福島洋樹, 大山圭悟, 安井年文, 鍋倉賢治, 宮下 憲, 関岡康雄, 永井 純 (1998) 下肢の筋持久力と400m走中の疾走速度遞減との関係. 体育学研究 42 : 370-379.

Putnam, C. A. (1991) A segment interaction analysis of proximal-to-distal sequential segment motion patterns. Med. Sci. Sports Exerc. 23 : 130-144.

Putnam, C. A. (1993) Sequential motions of body segments in striking and throwing skills: descriptions and explanations. J. Biomech. 26 : 125-134.

Raasch, C. C., Zajac, F. E., Ma, B. and Levine, W. S. (1996) Muscle coordination of maximum

speed pedaling. *J. Biomech.* 30 : 595-602.

Schache, A. G., Blanch, P. D. and Murphy, B. A. (2000) Relation of anterior pelvic tilt during running to clinical and kinematics measures of hip extension. *Br. J. Sports Med.* 34 : 279-283.

Simonsen, E. B., Thomasen, L. and Klausen, K. (1985) Activity of mono- and biarticular leg muscles during sprint running. *Eur. J. Appl. Physiol. Occup. Physiol.* 54 : 524-532.

Stefanyshyn, D. J. and Nigg, B. M. (1998) Dynamic angular stiffness of the ankle joint during running and sprinting. *J. Appl. Biomech.* 14 : 292-299.

Sullivan, M. K., DeJulia, J. J. and Worrell, T. W. (1992) Effect of pelvic position and stretching method on hamstring muscle flexibility. *Med. Sci. Sports Exerc.* 24 : 1383-1389.

Thys, H., Faraggiana, T. and Margaria, R. (1972) Utilization of muscle elasticity in exercise. *J. Appl. Physiol.* 32 : 491-494.

van Ingen Schenau, G. J. (1984) An alternative view of the concept of utilization of elastic energy in human movement. *Human movement science* 3 : 301-336.

van Ingen Schenau, G. J. (1989) From rotation to translation: constraints on multi-joint movements and the unique action of bi-articular muscles. *Human movement science*. 8 : 301-337.

Visser, J. J., Hoogkamer, J. E., Bobbert, M. F. and Huijing, P. A. (1990) Length and moment arm of human leg muscles as a function of knee and hip-joint angles. *Eur. J. Appl. Physiol.* 61: 453-460.

Walker, M. L., Rothstein, J. M., Finucane, S. D. and Lamb, R. L. (1987) Relationship between lumbar lordosis, pelvic tilt and abdominal muscle performance. *Phys. Ther.* 67: 512-516.

Wells, R. P. and Winter, D. A. (1980) Assessment of signal and noise in the kinematics of normal, pathological and sporting gaits. In *Human Locomotion I*, (Proceedings of the first biannual conference of the Canadian Society of Biomechanics). 92-93.

Winter, D. A. (1990) *Biomechanics and motor control of human movement*. John Wiley & Sons : New York. pp.41-43.

Winter, D. A., Prince, F., Frank, J. S., Powell, C. and Karl, F. Z. (1996) Unified theory regarding A/P and M/L balance in quiet stance. *J. Neurophysiol.* 75 : 2334-2443.

八杉隆一, 小関治男, 古谷雅樹, 日高敏隆 (1994) *生物学辞典 第4版* 岩波書店: 東京.

Yasukouchi, A. and Isayama, T. (1995) The relationships between lumbar curves, pelvic tilt and joint mobilities in different sitting postures in young adult males. *Appl. Human Sci.* 14 : 15-21.

Yoshifuku, Y. and Herzog, W. (1996) Maximal muscle power output in cycling, A modeling approach. *J. Sports Sci.* 14 : 139-157.

Yoshifuku, Y. and Herzog, W. (1990) Optimal design parameters of the bicycle-rider system for maximal muscle power output. *J. Biomechanics.* 23 : 1069-1079.

図子浩二, 西薗秀嗣, 平田文夫 (1998) 筋収縮の違いからみた下肢三関節のトルク発揮特性. 体力科学 47 : 593-600.

図子浩二, 高松 薫, 古藤高良 (1993) 各種スポーツ選手における下肢の筋力およびパワー発揮に関する特性. 体育学研究 38 : 265-278.

図子浩二, 高松 薫 (1995a) バリスティックな伸張一短縮サイクル運動を決定する要因. 一筋力および瞬発力に着目してー 体力科学 44 : 147—154.

図子浩二, 高松 薫 (1995b) リバウンドドロップジャンプにおける踏切時間を短縮する要因. 一下肢の各関節の仕事と接地に対する予測に着目してー 体育学研究 40 : 29—39.

図子浩二, 高松 薫 (1996) リバウンドドロップジャンプにおける着地動作の違いが踏切中のパワーに及ぼす影響. ー膝関節に着目してー 体力科学 45 : 209-218.