

## 参考文献

阿江通良・湯海鵬・横井孝志 (1992) 日本人アスリートの身体部分慣性特性の推定. バイオメカニズムⅡ, 23-33, 東京大学出版会, 東京.

阿江通良・渡川侃二・金原 勇・山口幸雄 (1979) 跳躍の踏切における神経・筋の働きに関する研究—予備緊張を中心に. 日本バイオメカニクス学会(編)身体運動の科学Ⅲ. 運動の制御. 杏林書院: 東京, pp322-345.

Alexander, R. McN. and Bennet-Clark, H. C. (1977) Storage of elastic strain energy in muscle and other tissue. *Nature*. **265** : 114 - 117.

Anderson, F. C. and Pandy, M. G. (1993) Storage and utilization of elastic strain energy during jumping. *J. Biomech.* **26** : 1413 - 1427.

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

Aura, O. and Viitasalo, J. T. (1989) Biomechanical characteristics of jumping. *Int. J. Sport Biomech.* **5** : 89 - 98.

Aura, O. and Komi, P. V. (1986) Effects of prestretch intensity on mechanical

efficiency of positive work and on elastic behavior of skeletal muscle in stretch shortening cycle exercises. *Int. J. Sports Med.* **7** : 137 - 143.

Avela, J., Santos, P. M. and Komi, P. V. (1996) Effects of differently induced stretch loads on neuromuscular control in drop jump exercises. *Eur. J. Appl. Physiol.* **72** : 553 - 562.

Avela, J., Santos, P. M., Kyröläinen, H. and Komi, P. V. (1994) Effects of different simulated gravity conditions on neuromuscular control in drop jump exercises. *Aviat. Space Environ. Med.* **65** : 301 - 308.

Bobbert, M. F., Gerritsen, K. G. M., Litjens, M. C. M. and van Soest, A. J. (1996) Why is countermovement jump height greater than squat jump height? *Med. Sci. Sports Exerc.* **28** : 1402 - 1412.

Bobbert, M. F. and Harlaar, J. (1993) Evaluation of moment-angle relationships in isokinetic knee extension. *Med. Sci. Sports Exerc.* **25** : 251 - 259.

Bobbert, M. F. and van Ingen Schenau, G. J. (1990a) Isokinetic plantar flexion : Experimental results and model calculations. *J. Biomech.* **23** : 105 - 119.

Bobbert, M. F. (1990b) Drop jumping as a training method for jumping ability. *Sports*

*Medicine.* **9** : 7 - 22.

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

Bobbert, M. F., Huijing, P. A. and van Ingen Schenau, G. J. (1987) 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 van Ingen Schenau, G. J. (1986a) An estimation of power output and work done by the human triceps surae muscle - tendon complex in jumping. *J. Biomech.* **19** : 899 - 906.

Bobbert, M. F., Huijing, P. A. and van Ingen Schenau, G. J. (1986b) A model of the human triceps surae muscle-tendon complex applied to jumping. *J. Biomech.* **19** : 887 - 898.

Bosco, C. and Viitasalo, J. T. (1982a) Potentiation of myoelectric activity in human muscles in vertical jumps. *Electromyogr. Clin. Neurophysiol.* **22** : 549 - 562.

Bosco, C., Viitasalo, J. T., Komi, P. V. and Luhtanen, P. (1982b) Combined effect of elastic energy and myoelectrical potentiation during stretch - shortening cycle exercise. *Acta physiol. Scand.* **114** : 557 - 565.

Bosco, C., Ito, A., Komi, P. V., Luhtanen, P., Rahkila, P., Rusko, H. and Viitasalo, J. T. (1982c) Neuromuscular function and mechanical efficiency of human leg extensor muscles during jumping exercises. *Acta physiol. Scand.* **114** : 543 - 550.

Bosco, C., Komi, P. V. and Ito, A. (1981a) Prestretch potentiation of human skeletal muscle during ballistic movement. *Acta Physiol. Scand.* **111** : 135 - 140.

Bosco, C. and Komi, P. V. (1981b) Influence of counter movement amplitude in potentiation of muscular performance. *Biomechanics VII*. pp129 - 135.

Bosco, C. and Komi, P. V. (1979a) Mechanical characteristics and fibre composition of human leg extensor muscles. *Eur. J. Appl. Physiol.* **41** : 275 - 284.

Bosco, C. and Komi, P. V. (1979b) Potentiation of the mechanical behavior of the human skeletal muscle through prestretching. *Acta physiol. Scand.* **106** : 467 - 472.

Burdett, R. G. (1982) Forces predicted at the ankle during running. *Med. Sci. Sports Exerc.* **14** : 308 - 316.

Cavagna, G. A., Citterio, G. and Jacini, P. (1975) The additional mechanical energy delivered by the contractile component of the previously stretched muscle. *J. Physiol.* **251** : 65P - 66P.

Cavagna, G. A., Dusman, B. and Margaria, R. (1970) Elastic bounce of the body. *J. Appl. Physiol.* **29** : 279 - 282.

Cavagna, G. A., Dusman, B. and Margaria, R. (1968) Positive work done by a previously stretched muscle. *J. Appl. Physiol.* **24** : 21 - 32.

Cavagna, G. A., Saibene, F. P. and Margaria, R. (1965) Effect of negative work on the amount of positive work performed by an isolated muscle. *J. Appl. Physiol.* **20** : 157 - 158.

Chapman, A. E. and Sanderson, D. J. (1990) Muscle coordination in sporting skills. In : *Multiple muscle systems : Biomechanics and movement organization*. Winters, J. and Woo, S. L. -Y. (Eds) . Berlin: Springer Verlag. pp. 608- 620.

Chapman, A. E. and Caldwell, G. E. (1985) The use of muscle stretch in inertial loading. *Biomechanics IX-A*. pp44 - 49.

Cutts, A. (1988) The range sarcomere lengths in the muscles of the human lower limb. *J. Anat.* **160** : 79 - 88.

Dietz, V., Noth, J., and Schmidbleicher, D. (1981) Interaction between pre-activity and stretch reflex in human triceps brachii during landing from forward falls. *J. Physiol.*

- Dietz, V. and Noth, J. (1978a) Spinal stretch reflexes of triceps surae in active and passive movements. *J. Physiol. (Lond)*. **284** : 180 - 181.
- Dietz, V., Schmidbleicher, S. and Noth, J. (1978b) Neuronal mechanisms of human locomotion. *J. Physiol.* **238** : 139 - 155.
- Dyhre-Poulsen, P., Simonsen, E. B. and Voigt, M. (1991) Dynamic control of muscle stiffness and H reflex modulation during hopping and jumping in man. *J. Physiol.* **437** : 287 - 304.
- Edman, K. A. P., Elzinga, G. and Noble, M. I. M. (1982) Residual force enhancement after stretch of contracting frog single muscle fibres. *J. Gen. Physiol.* **80** : 769 - 784.
- Ettema, G. J. C., van Soest, A. J. and Huijing, P. A. (1990) The role of series elastic structures in prestretch-induced work enhancement during isotonic and isokinetic contractions. *J. Exp. Biol.* **154** : 121 - 136.
- Farley, C. T. (1997) Role of the stretch-shortening cycle in jumping. *J. Appl. Biomech.* **13** : 436 - 438.

Friedrich, J. A. and Brand, R. A. (1990) Muscle fiber architecture in the human lower limb. *J. Biomech.* **23** : 91 - 95.

Fukashiro, S., Komi, P. V., Jarvinen, M. and Miyashita, M. (1995) In vivo achilles tendon loading during jumping in humans. *Eur. J. Appl. Physiol.* **71** : 453 - 458.

Fukashiro, S., Komi, P. V., Jarvinen, M. and Miyashita, M. (1993) Comparison between the directly measured achilles tendon force and the tendon force calculated from the joint ankle joint moment during vertical jumps. *Clin. Biomech.* **8** : 25 - 30.

Fukunaga, T., Ichinose, Y., Ito, M., Kawakami, Y. and Fukashiro, S. (1997) Determination of fascicle length and pennation in a contracting human muscle in vivo. *J. Appl. Physiol.* **82** : 354 - 358.

Fukunaga, T., Ito, M., Ichinose, Y., Kuno, S., Kawakami, Y. and Fukashiro, S. (1996) Tendinous movement of a human muscle during voluntary contractions determined by real-time ultrasonography. *J. Appl. Physiol.* **81** : 1430 - 1433.

Gielen, S., van Ingen Schenau, G. J., Tax, T. and Theeuwen, M. (1990) The activation of mono- and biarticular muscles in multi-joint movements. In : *Multiple muscle systems : Biomechanics and movement organization*. Winters, J. and Woo, S. L.-Y. (Eds) . Berlin: Springer Verlag. pp. 302 - 311.

Gollhofer, A., Strojnik, V., Rapp, W. and Schweizer, L. (1992) Behaviour of trice surae muscle - tendon in different jump conditions. *Eur. J. Appl. Physiol.* **64** : 281-291.

Gollhofer, A. and Kyröläinen, H. (1991) Neuromuscular control of the human I-extensor muscles in jump exercises under various stretch-load conditions. *Int. J. Sports Med.* **12** : 34 - 40.

Gollhofer, A., Schmidbleicher, D., and Dietz, V. (1984) Regulation of muscle stiffness in human locomotion. *Int. J. Sports Med.* **5** : 19 - 22.

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

Gregor, R. J., Roy, R. R., Whiting, W. C., Lovely, R. G., Hodgson, J. A. and Edgerton, V. R. (1988) Force-velocity potentiation in cat soleus muscle during treadmill locomotion. *J. Biomech.* **21** : 721 - 732.

Gregor, R. J., Komi, P. V. and Jarvinen, M. (1987) Achilles tendon forces during cycling. *Int. J. Sports Med.* **8 (Suppl)** : 9 - 14.

Grieve, D. W., Pheasant, S. and Cavanagh, P. R. (1978) Prediction of gastrocnemius length from knee and ankle joint posture. *Biomechanics VI-A*. pp 405 - 412.

Griffiths, R. I. (1991) Shortening of muscle fibers during stretch of the active cat medial gastrocnemius muscle : the role of tendon compliance. *J. Physiol.* **436** : 219 - 236.

Gollnick, P. D., Armstrong, R. B., Saubert IV, C. W., Piehl, K. and Saltin, B. (1974) Effect of training on enzyme activity and fiber composition of human skeletal muscle. *J. Appl. Physiol.* **34** : 107 - 111.

Gottlieb, G. L. and Agarwal, G. C. (1979) Response to sudden torques about ankle in man : Myotatic reflex. *J. Neurophysiol.* **42** : 91 - 106.

Hill, A. V. (1938) The heat of shortening and the dynamic constants of muscle. *Proc Royal Soc.* **126** : 136 - 195.

Hoffer, J. A. and Andreassen, S. (1981) Regulation of soleus stiffness in premammillary cats : Intrinsic and reflex components. *J. Neurophysiol.* **45** : 267 - 285.

Houk, J. C. (1979) Regulation of stiffness by skeleto-motor reflexes. *Ann. Rev. Physiol.* **41** : 99 - 114.

Hull, M. L. and Hawkins, D. A. (1990) Analysis of work in multisegmental movements : Application to cycling. In : *Multiple muscle systems : Biomechanics and movement organization*. Winters, J. and Woo, S. L. -Y. (Eds) . Berlin: Springer Verlag, pp. 621 - 638.

Huxley, A. F. and Simmons, R. M. (1971) Proposed mechanism of force generation in striated muscles. *Nature*, **233** : 533 - 538.

市之瀬慈歩・伊藤雅充・川上泰雄・福永哲夫 (1997) 静的筋活動時でも筋線維は短縮する. 第13回日本バイオメカニクス学会大会論文集「身体運動のバイオメカニクス」 pp. 486 - 490.

Ito, M., Kawakami, Y., Ichinose, Y., Fukashiro, S. and Fukunaga, T. (1998) Nonisometric behavior of fascicles during isometric contractions of a human muscle. *J. Appl. Physiol.*, **85** : 1230 - 1235.

伊藤 章・斎藤昌久・金子公宥 (1987) 跳躍運動における反動効果－下腿三頭筋の筋放電量と弾性エネルギーの利用. *Jpn. J. Sport Sci.*, **6** : 232 - 238.

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

- Jacobs, R., Bobbert, M. F. and van Ingen Schenau, G. J. (1993) Function of mono- and biarticular muscles in running. *J. Biomech.* **25** : 1163 - 1173.
- Jacobs, R. and van Ingen Schenau, G. J. (1992) Intermuscular coordination in sprint push-off. *J. Biomech.* **25** : 953 - 965.
- Jaric, S., Gavrilovic, P. and Ivancevic, V. (1985) Effects of previous muscle contraction on cyclic movement dynamics. *Eur. J. Appl. Physiol.* **54** : 216 - 221.
- Jody, L. J. and Russell, P. J. (1985) Depth jump training and volleyball spike. In : *Biomechanics in sports II*. Terauds, J. and Barham, J. N. (ed.), Academic Publishers, pp. 304 - 313.
- Kamen, G. (1985) Characteristics of the achilles tendon reflex following isometric and isotonic exercise. *Res. Quart.* **56** : 238 - 244.
- Kawakami, Y., Abe, T. and Fukunaga, T. (1993) Muscle-fiber pennation angles are greater in hypertrophied than in normal muscles. *J. Appl. Physiol.* **74** : 2740 - 2744.
- 金原 勇・春山国広・三浦望慶 (1964a) 跳躍力を大きくする基礎的技術の研究 (その1) - 反動動作と振込動作について-. 東京教育大学体育学部スポーツ研究所報 No. 2 : 21-31.

金原 勇・春山国広・三浦望慶 (1964b) 投てき力（投てき物に与え得る運動量）を大きくする基礎的技術の研究（その1）－反動動作について－. 東京教育大学体育学部スポーツ研究所報 No. 4 : 137-146.

小島武次・琉子友男・近藤正勝 (1983) 反動動作を伴った下肢屈伸運動における弾性エネルギーの役割. *Jpn. J. Sport Sci.* 2 : 152 - 156.

Komi, P. V., Fukashiro, S. and Jarvinen, M. (1992a) Biomechanical loading of achilles tendon during normal locomotion. *Clinics in Sports Medicine*. 11 : 521 - 531.

Komi, P. V. (1992b) Stretch-shortening cycle. In : *Strength and power in sport*. Komi, P. V. (ed.), Blackwell Scientific Publications, London, pp. 169 - 179.

Komi, P. V. (1990) Relevance of in vivo force measurements to human biomechanics. *J. Biomech.* 23 : 23 - 34.

Komi, P. V., Salonen, M., Jarvinen, M. and Kokko, O. (1987) In vivo registration of achilles tendon forces in man: I. Methodological development. *Int. J. Sports Med.* 8 : 3 - 8.

Komi, P. V. (1986) Training of muscle strength and power. Interaction of neuromotoric, hypertrophic, and mechanical factors. *Int. J. Sports Med.* 7 : S10 - S15.

Komi, P. V., Salonen, M. and Jarvinen, M. (1984a) In vivo measurement of achilles tendon forces in man. *Med. Sci. Sports.* **16** : 165 - 166.

Komi, P. V. (1984b) Physiological and biomechanical correlates of muscle function : effects of muscle structure and stretch-shortening cycle on force and speed. *In : Exercise and Sports Science Reviews* 12. ACSM Series, The collamore Press, Lexington, pp81 - 121.

Komi, P. V., Karlsson, J., Tesch, P., Suominen, H. and Heikkinen, E. (1982) Effects of heavy resistance and explosive type strength training methods on mechanical, functional and aspects performance. *In : Exercise and Sport Biology.* Komi, P. V. (ed.), Human Kinetics, Champaign, Illinois, pp. 90 - 102.

Komi, P. V. (1979) Neuromuscular performance : Factors influencing force and speed production. *Scand. J. Sports Sci.* **1** : 2 - 15.

Komi, P. V. and Bosco, C. (1978) Utilization of stored elastic energy in leg extensor muscles by men and women. *Med. Sci. Sports.* **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.

Kurokawa, S., Honglinang, Y., Nagareda, H., Funato, , K. and Fukunaga, T. (1997 ) Muscle fiber behavior of gastrocnemius during vertical jumping. In : *Books of abstracts from the XVIth international congress of biomechanics*. University of Tokyo, Japan. pp233.

Kyröläinen, 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.

Kyröläinen, H. and Komi, P.V. (1994) Stretch reflex responses following mechanical stimulation in power- and endurance- trained athletes. *Int. J. Sports Med.* **15** : 290 - 294.

Kyröläinen, H. and Komi, P. V. and Kim, D. H. (1991) Effects of power training on neuromuscular performance and mechanical efficiency. *Scand. J. Med. Sci. Sports.* **1** : 78 - 87.

Lieber, R. (1992) Skeletal muscle structure and function. *Williams and Wilkins*. pp. 112 - 139.

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

Melvill - Jones, G. and Watt, D. G. D. (1971b) Observation on the control of stepping and hopping movements in man. *J. Physiol.* **219** : 709 - 727.

Milner-Brown, H. S., Stein, R. B. and Yemm, R. (1973) Changes in firing rate of human motor units during linearly changing voluntary contractions. *J. Physiol.* **230** : 359 - 370.

Miller, B. P. and Power, S. L. D. (1981) Developing power in athletics through the process of depth jumping. *T. & F. Quart. Rev.* **81** : 52 - 54.

Morgan, D. L. (1977) Separation of active and passive components of short range stiffness of muscle. *Am. J. Physiol.* **232** : 45 - 49.

Moritani, T., Oddsson, L. and Thorstensson, A. (1990) Differences in modulation of the gastrocnemius and soleus H-reflexes during hopping in man. *Acta Physiol. Scand.* **138** : 575 - 576.

Mungiole, M. and Winters, J. M. (1990) Overview : Influences of muscle on cyclic and propulsive movements involving the lower limb. In : *Multiple muscle systems : Biomechanics and movement organization*. Winters, J. and Woo, S. L. -Y. (Eds) . Berlin: Springer Verlag. pp. 550 - 567.

Nichols, T. R. and Houk, J. C. (1976) Improvement in linearity and regulation of stiffness that results from actions of stretch reflex. *J. Neurophysiol.* **39** : 119 - 142.

Nicol, C., Komi, P. V., Belli, A., Huttunen, V. and Partio, E. (1995) Reflex contribution of achilles tendon forces : In vivo measurements with the optic fibre technique. *In : Books of abstracts from the XVth international congress of biomechanics.* University of Jyvaskyla, Finland. pp674 - 675.

Pandy, M. G. and Zajac, F. E. (1991) Optimal muscular coordination strategies for jumping. *J. Biomech.* **24** : 1 - 10.

Peres, G., Maton, B., Lanjerit, B. and Philippe, C. (1983) Electromyographic and mechanical aspects of the coordination between elbow flexor muscles in monkeys. *Biomechanics VII-A.* pp455- 463.

Rack, P. M. H. and Westbury, D. R. (1974) The short range stiffness of active mammalian muscle and its effect on mechanical properties. *J. Physiol.* **240** : 331 - 350.

Roberts, T. J., Marsh, R. L., Weyand, P. G. and Taylor, C. R. (1997) Muscular force in running turkeys : the economy of minimizing work. *Science.* **275** : 1113 - 1115.

Roy, R. R. and Edgerton, V. R. (1992) Skeletal muscle architecture and performance. *In : Strength and power in sport.* Komi, P. V. (ed.), Blackwell Scientific Publications,

London, pp. 115 - 129.

Rutherford, O. M. and Jones, D. A. (1992) Measurement of fibre pennation using ultrasound in the human quadriceps in vivo. *Eur. J. Appl. Physiol.* **65** : 433 - 437.

Schmidbleicher, D. and Gollhofer, A. (1982) Neuromuskuläre Untersuchungen zur Bestimmung individueller Belastungsgrößen für ein Tiefsprungtraining. *Leistungssport.* **12** : 298 - 307.

Svantesson, U., Grimby, G. and Thomée, R. (1994) Potentiation of concentric plantar flexion torque following eccentric and isometric muscle actions. *Acta Physiol. Scand.* **152** : 287 - 293.

Svantesson, U., Ernstoff, B., Bergh, P. and Grimby, G. (1991) Use of a Kin-Com dynamometer to study the stretch-shortening cycle during plantar flexion. *Eur. J. Appl. Physiol.* **62** : 415 - 419.

高松 薫・会田 宏・団子浩二 (1991) Isometricおよびeccentricな予備緊張が肘屈曲速度に及ぼす影響. - Concentricな収縮中の負荷重量および動作範囲に着目して-. *体育学研究* **36** : 127 - 139.

高松 薫・団子浩二・会田 宏・吉田 亨・石島 繁 (1989) デプスジャンプ

における台高と踏切中の膝曲げ動作の相違が跳躍高および下肢にかかる負荷特性に及ぼす影響. 昭和63年度日本体育協会スポーツ科学研究報告NO. IX プライオメトリッククリアクティブ筋力トレーニングに関する研究-第2報-, 46-55

高松 薫・宮坂雅昭・団子浩二・石島 繁 (1988) 各種台高からのデプスジャンプにおける跳躍高と踏切各局面の力学量. 昭和62年度日本体育協会スポーツ科学研究報告NO. VII プライオメトリッククリアクティブ筋力トレーニングに関する研究-第1報-, 56-62.

Thomas, D. F. O., Sagar, G., White, M. J. and Davies, C. T. M. (1988) Electrically evoked isometric and isokinetic properties of the triceps surae in young male subjects. *Eur. J. Appl. Physiol.* **58** : 321 - 326.

Thys, H., Cavagna, G. A. and Margaria, R. (1975) The role played by elasticity in an exercise involving movements of small amplitude. *Pflugers Arch.* **354** : 281 - 286.

van Ingen Schenau, G. J., Bobbert, M. F. and Haan, A. de. (1997) Does elastic energy enhance work and efficiency in the stretch-shortening cycle? *J. Appl. Biomech.* **13** : 389 - 415.

van Ingen Schenau, G. J., Boots, P. J. M., de Groot, G., Snackers, R. J. and van Woensel, W. W. L. M. (1992) The constrained control of force and position in multi-

joint movements. *Neuroscience*. **46** : 197 - 207.

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.

Voigt, M., Bojsen-Møller, F., Simonsen, E. B. and Dyhre-Poulsen, P. (1995a) The influence of tendon Young's modulus, dimensions and instantaneous moment arms on the efficiency of human movement. *J. Biomech.* **28** : 281 - 291.

Voigt, M., Simonsen, E. B., Dyhre-Poulsen, P. and Klausen, K. (1995b) Mechanical and muscular factors influencing the performance in maximal vertical jumping after different prestretch loads. *J. Biomech.* **28** : 293 - 307.

Walmsley, B., Hodgson, J. A. and Burke, R. E. (1978) Forces produced by the medial gastrocnemius and soleus muscles during locomotion in freely moving cats. *J. Neurophysiol.* **5** : 535 - 577.

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)*. pp92 - 93.

Whiting, W. C., Gregor, R. J., Roy, R. R. and Edgerton, V. R. (1984) A technique for estimating mechanical work of individual muscles in the cat during treadmill locomotion. *J. Biomech.* **17** : 685 - 694.

Wickiewicz, T. L., Roy, R. R., Powell, P. L. and Edgerton, V. R. (1983) Muscle architecture of the human lower limb. *Clin. Orthopaed. Rel. Res.* **179** : 275 - 283.

Winter, D. A. (1990) Biomechanics and motor control of human movement. 2nd edition, A Wiley-Interscience Publication, New York, pp. 75 - 102.

Yamaguchi, G. T., Sawa, A. G. U., Moran, D. W., Fessler, M. J. and Winters, M. (1990) A survey of human musculotendon actuator parameters. In : *Multiple muscle systems : Biomechanics and movement organization*. Winters, J. and Woo, S. L. -Y. (Eds) . Berlin: Springer Verlag. pp. 717 - 773.

山崎良比古・鬼頭伸和・三井淳蔵・穂丸武臣 (1980) 律動的ジャンプ動作における伸張反射. *体育学研究*. **25** : 113-118.

米田繼武 (1989) すばやい力発揮の制御. *Jpn. J. Sports Sci.* **10** : 657-662.

尹聖鎮・村木征人・高松 薫 (1999a) 傾斜面でのリバウンドジャンプにおける腓腹筋ーアキレス腱複合体の神経筋活動ー跳躍方法および跳躍トレーニング

経験の相違に着目して一. 体育学研究. 審査中.

尹聖鎮・大山木圭悟・岡田英孝・高松 薫 (1999b) 傾斜面でのリバウンドジャンプにおける腓腹筋のstiffnessがアキレス腱張力に及ぼす影響. 体育学研究. 44 (6). 印刷中.

尹聖鎮・岡田英孝・藤井範久・高松 薫 (1998) 傾斜面での伸張-短縮サイクル運動における腓腹筋のstiffness特性:パワー系競技者と一般健常者の比較. 体力科学. 47 : 703.

Yoon, S., Ohyama, B. K., Okada, H., Fujii, N. and Takamatsu, K. (1997) Effects of slanted contact surface on neuromuscular control of the human triceps surae muscle in stretch-shortening cycle exercises. In : Books of abstracts from the XVIth international congress of biomechanics. University of Tokyo, Japan. pp246.

尹聖鎮・岡田英孝・藤井範久・高松 薫 (1997) 傾斜面での各種跳躍運動における下肢関節の貢献度およびアキレス腱の発揮張力. 体力科学. 46 : 784.

Zajac, F. E. (1989) Muscle and tendon : Properties, models, scaling, and application to biomechanics and motor control. CRC Crit. Rev. Biomed. Eng. 17 : 359 - 411.

団子浩二・西薙秀嗣・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 (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－膝関節に着目して－. 体力科学. 45 : 209 - 218.

図子浩二・高松 薫 (1995a) バリスティックな伸張－短縮サイクル運動の遂行能力を決定する要因－筋力および瞬発力に着目して－. 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短縮する要因－下肢の各関節の仕事と着地に対する予測に着目して－. 体育学研究. 40 : 29 - 39.

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・古藤高良 (1992) 台高と付加重量の相違がドロップジャンプのパワー発揮に及ぼす影響. いばらき体育・スポーツ科学. 8 : 11 - 18.