

『最新のスポーツ科学で強くなる！』で使用した参考文献

第1講

- 崔、鳥淵、高橋英幸、板井悠二、高松薫 (1999) 「パワーアップ型」と「バルクアップ型」筋力トレーニング手段のトレーニング効果の相違-筋断面積、筋力、無氣的パワーおよび無氣的持久力に着目して-. 体力科学 47,119-130.
- Brooks GA (2018) The Science and Translation of Lactate Shuttle Theory. *Cell Metab* 27 (4):757-785. doi:10.1016/j.cmet.2018.03.008
- Faude O, Kindermann W, Meyer T (2009) Lactate threshold concepts: how valid are they? *Sports Med* 39 (6):469-490. doi:10.2165/00007256-200939060-00003
- Kraemer WJ, Marchitelli L, Gordon SE, Harman E, Dziados JE, Mello R, Frykman P, McCurry D, Fleck SJ (1990) Hormonal and growth factor responses to heavy resistance exercise protocols. *J Appl Physiol* (1985) 69 (4):1442-1450. doi:10.1152/jappl.1990.69.4.1442
- Kraemer WJ, Ratamess NA (2005) Hormonal responses and adaptations to resistance exercise and training. *Sports Med* 35 (4):339-361. doi:10.2165/00007256-200535040-00004
- Gordon SE, Kraemer WJ, Vos NH, Lynch JM, Knuttgen HG (1994) Effect of acid-base balance on the growth hormone response to acute high-intensity cycle exercise. *J Appl Physiol* (1985) 76 (2):821-829. doi:10.1152/jappl.1994.76.2.821
- Gravholt CH, Schmitz O, Simonsen L, Bulow J, Christiansen JS, Moller N (1999) Effects of a physiological GH pulse on interstitial glycerol in abdominal and femoral adipose tissue. *Am J Physiol* 277 (5):E848-854. doi:10.1152/ajpendo.1999.277.5.E848
- Nielsen RH, Doessing S, Goto K, Holm L, Reitelseder S, Agergaard J, Schjerling P, Flyvberg A, Kjaer M (2011) GH receptor blocker administration and muscle-tendon collagen synthesis in humans. *Growth Horm IGF Res* 21 (3):140-145. doi:10.1016/j.ghir.2011.03.006

第2講

- レジスタンス運動における Strength-up type と Bulk-up type の負荷特性の相違 : 筋放電量および成長ホルモンの分泌に着目して (2003) 体育学研究 48 (4): 383-393. doi: 10.5432/jjpehss.KJ00003390830
- Goto K, Nagasawa M, Yanagisawa O, Kizuka T, Ishii N, Takamatsu K (2004) Muscular adaptations to combinations of high- and low-intensity resistance exercises. *J*

Strength Cond Res 18 (4):730-737. doi:10.1519/R-13603.1

Goto K, Ishii N, Takamatsu K (2004) Growth hormone response to training regimen with

combined high-and low-intensity resistance exercises. *Int J Sport Health Sci* 2:111-118.

doi: 10.5432/ijshs.2.111

第 3 講

Takarada Y, Nakamura Y, Aruga S, Onda T, Miyazaki S, Ishii N (2000) Rapid increase in plasma growth hormone after low-intensity resistance exercise with vascular occlusion. *J Appl Physiol* (1985) 88 (1):61-65. doi:10.1152/jappl.2000.88.1.61

Takarada Y, Takazawa H, Sato Y, Takebayashi S, Tanaka Y, Ishii N (2000) Effects of resistance exercise combined with moderate vascular occlusion on muscular function in humans. *J Appl Physiol* (1985) 88 (6):2097-2106. doi:10.1152/jappl.2000.88.6.2097

Takarada Y, Sato Y, Ishii N (2002) Effects of resistance exercise combined with vascular occlusion on muscle function in athletes. *Eur J Appl Physiol* 86 (4):308-314. doi:10.1007/s00421-001-0561-5

Tanimoto M, Ishii N (2006) Effects of low-intensity resistance exercise with slow movement and tonic force generation on muscular function in young men. *J Appl Physiol* (1985) 100 (4):1150-1157. doi:10.1152/japplphysiol.00741.2005

Watanabe Y, Madarame H, Ogasawara R, Nakazato K, Ishii N (2014) Effect of very low-intensity resistance training with slow movement on muscle size and strength in healthy older adults. *Clin Physiol Funct Imaging* 34 (6):463-470. doi:10.1111/cpf.12117

MacDougall JD, Tuxen D, Sale DG, Moroz JR, Sutton JR (1985) Arterial blood pressure response to heavy resistance exercise. *J Appl Physiol* (1985) 58 (3):785-790. doi:10.1152/jappl.1985.58.3.785

第 4 講

Tabata I, Nishimura K, Kouzaki M, Hirai Y, Ogita F, Miyachi M, Yamamoto K (1996) Effects of moderate-intensity endurance and high-intensity intermittent training on anaerobic capacity and $\dot{V}O_2\text{max}$. *Med Sci Sports Exerc* 28 (10):1327-1330. doi:10.1097/00005768-199610000-00018

Ikutomo A, Kasai N, Goto K (2018) Impact of inserted long rest periods during repeated

sprint exercise on performance adaptation. *Eur J Sport Sci* 18 (1):47-53.

doi:10.1080/17461391.2017.1383515

Edge J, Bishop D, Goodman C, Dawson B (2005) Effects of high- and moderate-intensity training on metabolism and repeated sprints. *Med Sci Sports Exerc* 37 (11):1975-1982. doi:10.1249/01.mss.0000175855.35403.4c

Bishop D, Girard O, Mendez-Villanueva A (2011) Repeated-sprint ability - part II: recommendations for training. *Sports Med* 41 (9):741-756. doi:10.2165/11590560-000000000-00000

第 5 講

Markovic G (2007) Does plyometric training improve vertical jump height? A meta-analytical review. *Br J Sports Med* 41 (6):349-355; discussion 355.

doi:10.1136/bjism.2007.035113

Asmussen E, Bonde-Petersen F (1974) Storage of elastic energy in skeletal muscles in man. *Acta Physiol Scand* 91 (3):385-392. doi:10.1111/j.1748-1716.1974.tb05693.x

Bobbert MF, Gerritsen KG, Litjens MC, Van Soest AJ (1996) Why is countermovement jump height greater than squat jump height? *Med Sci Sports Exerc* 28 (11):1402-1412. doi:10.1097/00005768-199611000-00009

Bosco C, Viitasalo JT, Komi PV, Luhtanen P (1982) Combined effect of elastic energy and myoelectrical potentiation during stretch-shortening cycle exercise. *Acta Physiol Scand* 114 (4):557-565. doi:10.1111/j.1748-1716.1982.tb07024.x

Bosco C, Montanari G, Tarkka I, Latteri F, Cozzi M, Iachelli G, Faina M, Colli R, Dal Monte A, La Rosa M, et al. (1987) The effect of pre-stretch on mechanical efficiency of human skeletal muscle. *Acta Physiol Scand* 131 (3):323-329. doi:10.1111/j.1748-1716.1987.tb08246.x

Bosco C, Komi PV (1979) Potentiation of the mechanical behavior of the human skeletal muscle through prestretching. *Acta Physiol Scand* 106 (4):467-472.

doi:10.1111/j.1748-1716.1979.tb06427.x

Bosco C, Ito A, Komi PV, Luhtanen P, Rahkila P, Rusko H, Viitasalo JT (1982) Neuromuscular function and mechanical efficiency of human leg extensor muscles during jumping exercises. *Acta Physiol Scand* 114 (4):543-550. doi:10.1111/j.1748-1716.1982.tb07022.x

Cavagna GA, Saibene FP, Margaria R (1965) Effect of negative work on the amount of positive work performed by an isolated muscle. *J Appl Physiol* 20:157-158. doi:10.1152/jappl.1965.20.1.157

Harman EA, Rosenstein MT, Frykman PN, Rosenstein RM (1990) The effects of arms and countermovement on vertical jumping. *Med Sci Sports Exerc* 22 (6):825-833. doi:10.1249/00005768-199012000-00015

第 6 講

Douglas J, Pearson S, Ross A, McGuigan M (2017) Eccentric exercise: physiological characteristics and acute responses. *Sports Med* 47 (4):663-675. doi:10.1007/s40279-016-0624-8

Vogt M, Hoppeler HH (2014) Eccentric exercise: mechanisms and effects when used as training regime or training adjunct. *J Appl Physiol* (1985) 116 (11):1446-1454. doi:10.1152/jappphysiol.00146.2013

Kelly SB, Brown LE, Hooker SP, Swan PD, Buman MP, Alvar BA, Black LE (2015) Comparison of concentric and eccentric bench press repetitions to failure. *J Strength Cond Res* 29 (4):1027-1032. doi:10.1519/JSC.0000000000000713

Roig M, O'Brien K, Kirk G, Murray R, McKinnon P, Shadgan B, Reid WD (2009) The effects of eccentric versus concentric resistance training on muscle strength and mass in healthy adults: a systematic review with meta-analysis. *Br J Sports Med* 43 (8):556-568. doi:10.1136/bjism.2008.051417

第 7 講

Dufour SP, Ponsot E, Zoll J, Doutreleau S, Lonsdorfer-Wolf E, Geny B, Lampert E, Fluck M, Hoppeler H, Billat V, Mettauer B, Richard R, Lonsdorfer J (2006) Exercise training in normobaric hypoxia in endurance runners. I. Improvement in aerobic performance capacity. *J Appl Physiol* (1985) 100 (4):1238-1248. doi:10.1152/jappphysiol.00742.2005

Sumi D, Kojima C, Goto K (2018) Impact of endurance exercise in hypoxia on muscle damage, inflammatory and performance responses. *J Strength Cond Res* 32 (4):1053-1062. doi:10.1519/JSC.0000000000001911

Kettunen O, Leppavuori A, Mikkonen R, Peltonen JE, Nummela A, Wikstrom B, Linnamo V (2023) Hemoglobin mass and performance responses during 4 weeks of normobaric "live high-train low and high". *Scand J Med Sci Sports* 33 (8):1335-1344. doi:10.1111/sms.14378

Brocherie F, Millet GP, Hauser A, Steiner T, Rysman J, Wehrli JP, Girard O (2015) "Live High-Train Low and High" hypoxic training improves team-sport performance. *Med Sci Sports Exerc* 47 (10):2140-2149. doi:10.1249/MSS.0000000000000630

- Kasai N, Mizuno S, Ishimoto S, Sakamoto E, Maruta M, Goto K (2015) Effect of training in hypoxia on repeated sprint performance in female athletes. *Springerplus* 4:310. doi:10.1186/s40064-015-1041-4
- Brocherie F, Girard O, Faiss R, Millet GP (2017) Effects of repeated-sprint training in hypoxia on sea-level performance: A meta-analysis. *Sports Med* 47 (8):1651-1660. doi:10.1007/s40279-017-0685-3
- Woorons X, Mucci P, Aucouturier J, Anthierens A, Millet GP (2017) Acute effects of repeated cycling sprints in hypoxia induced by voluntary hypoventilation. *Eur J Appl Physiol* 117 (12):2433-2443. doi:10.1007/s00421-017-3729-3
- Woorons X, Millet GP, Mucci P (2019) Physiological adaptations to repeated sprint training in hypoxia induced by voluntary hypoventilation at low lung volume. *Eur J Appl Physiol* 119 (9):1959-1970. doi:10.1007/s00421-019-04184-9
- Fornasier-Santos C, Millet GP, Woorons X (2018) Repeated-sprint training in hypoxia induced by voluntary hypoventilation improves running repeated-sprint ability in rugby players. *Eur J Sport Sci* 18 (4):504-512. doi:10.1080/17461391.2018.1431312
- Brechbuhl C, Brocherie F, Willis SJ, Blokker T, Montalvan B, Girard O, Millet GP, Schmitt L (2020) On the use of the repeated-sprint training in hypoxia in tennis. *Front Physiol* 11:588821. doi:10.3389/fphys.2020.588821
- Faiss R, Girard O, Millet GP (2013) Advancing hypoxic training in team sports: from intermittent hypoxic training to repeated sprint training in hypoxia. *Br J Sports Med* 47 Suppl 1 (Suppl 1):i45-50. doi:10.1136/bjsports-2013-092741

第 8 講

- Brooks GA (2018) The Science and Translation of Lactate Shuttle Theory. *Cell Metab* 27 (4):757-785. doi:10.1016/j.cmet.2018.03.008
- van Hall G (2010) Lactate kinetics in human tissues at rest and during exercise. *Acta Physiol (Oxf)* 199 (4):499-508. doi:10.1111/j.1748-1716.2010.02122.x
- Faude O, Kindermann W, Meyer T (2009) Lactate threshold concepts: how valid are they? *Sports Med* 39 (6):469-490. doi:10.2165/00007256-200939060-00003
- Burgomaster KA, Heigenhauser GJ, Gibala MJ (2006) Effect of short-term sprint interval training on human skeletal muscle carbohydrate metabolism during exercise and time-trial performance. *J Appl Physiol* (1985) 100 (6):2041-2047. doi:10.1152/jappphysiol.01220.2005
- 塩瀬圭佑、飛奈卓郎、桧垣靖樹、清永明、田中宏暁 (2011) 骨格筋グリコーゲンの効率的な減少を目的とした高強度間欠的運動プロトコル. *体力科学*

第 9 講

- MacDougall JD, Ward GR, Sutton JR (1977) Muscle glycogen repletion after high-intensity intermittent exercise. *J Appl Physiol Respir Environ Exerc Physiol* 42 (2):129-132. doi:10.1152/jappl.1977.42.2.129
- Hansen AK, Fischer CP, Plomgaard P, Andersen JL, Saltin B, Pedersen BK (2005) Skeletal muscle adaptation: training twice every second day vs. training once daily. *J Appl Physiol* (1985) 98 (1):93-99. doi:10.1152/japplphysiol.00163.2004
- Yeo WK, Paton CD, Garnham AP, Burke LM, Carey AL, Hawley JA (2008) Skeletal muscle adaptation and performance responses to once a day versus twice every second day endurance training regimens. *J Appl Physiol* 105 (5):1462-1470. doi:90882.2008 [pii]10.1152/japplphysiol.90882.2008
- Ghiarone T, Andrade-Souza VA, Learsi SK, Tomazini F, Ataide-Silva T, Sansonio A, Fernandes MP, Saraiva KL, Figueiredo R, Tourneur Y, Kuang J, Lima-Silva AE, Bishop DJ (2019) Twice-a-day training improves mitochondrial efficiency, but not mitochondrial biogenesis, compared with once-daily training. *J Appl Physiol* (1985) 127 (3):713-725. doi:10.1152/japplphysiol.00060.2019
- Kentta G, Hassmen P (1998) Overtraining and recovery. A conceptual model. *Sports Med* 26 (1):1-16. doi:10.2165/00007256-199826010-00001
- Fry RW, Morton AR, Keast D (1991) Overtraining in athletes. An update. *Sports Med* 12 (1):32-65. doi:10.2165/00007256-199112010-00004
- Kuipers H, Keizer HA (1988) Overtraining in elite athletes. Review and directions for the future. *Sports Med* 6 (2):79-92. doi:10.2165/00007256-198806020-00003

第 10 講

- 消防庁 (2023) 令和 5 年 (5 月から 9 月) の熱中症による救急搬送状況.
- Periard JD, Racinais S, Sawka MN (2015) Adaptations and mechanisms of human heat acclimation: Applications for competitive athletes and sports. *Scand J Med Sci Sports* 25 Suppl 1:20-38. doi:10.1111/sms.12408
- Zurawlew MJ, Walsh NP, Fortes MB, Potter C (2016) Post-exercise hot water immersion induces heat acclimation and improves endurance exercise performance in the heat. *Scand J Med Sci Sports* 26 (7):745-754. doi:10.1111/sms.12638
- Ashworth E, Cotter J, Kilding A (2023) Post-exercise, passive heat acclimation with sauna or hot-water immersion provide comparable adaptations to performance in the

heat in a military context. *Ergonomics* 66 (1):49-60.

doi:10.1080/00140139.2022.2058096

Okazaki K, Hayase H, Ichinose T, Mitono H, Doi T, Nose H (2009) Protein and carbohydrate supplementation after exercise increases plasma volume and albumin content in older and young men. *J Appl Physiol* (1985) 107 (3):770-779.

doi:10.1152/jappphysiol.91264.2008

Daanen HAM, Racinais S, Periard JD (2018) Heat acclimation decay and re-induction: A systematic review and meta-analysis. *Sports Med* 48 (2):409-430.

doi:10.1007/s40279-017-0808-x

Racinais S, Periard JD (2020) Benefits of heat re-acclimation in the lead-up to the Tokyo Olympics. *Br J Sports Med* 54 (16):945-946.

doi:10.1136/bjsports-2020-102299

Garrett AT, Rehrer NJ, Patterson MJ (2011) Induction and decay of short-term heat acclimation in moderately and highly trained athletes. *Sports Med* 41 (9):757-771.

doi:10.2165/11587320-000000000-00000

第 11 講

Parra J, Cadefau JA, Rodas G, Amigo N, Cusso R (2000) The distribution of rest periods affects performance and adaptations of energy metabolism induced by high-intensity training in human muscle. *Acta Physiol Scand* 169 (2):157-165.

doi:aps730 [pii]

Areta JL, Burke LM, Ross ML, Camera DM, West DW, Broad EM, Jeacocke NA, Moore DR, Stellingwerff T, Phillips SM, Hawley JA, Coffey VG (2013) Timing and distribution of protein ingestion during prolonged recovery from resistance exercise alters myofibrillar protein synthesis. *J Physiol* 591 (9):2319-2331.

doi:10.1113/jphysiol.2012.244897

Phillips SM, Tipton KD, Aarsland A, Wolf SE, Wolfe RR (1997) Mixed muscle protein synthesis and breakdown after resistance exercise in humans. *Am J Physiol* 273 (1 Pt 1):E99-107. doi:10.1152/ajpendo.1997.273.1.E99

Doering TM, Cox GR, Areta JL, Coffey VG (2019) Repeated muscle glycogen supercompensation with four days' recovery between exhaustive exercise. *J Sci Med Sport* 22 (8):907-911. doi:10.1016/j.jsams.2019.03.009

van Loon LJ, Saris WH, Kruijshoop M, Wagenmakers AJ (2000) Maximizing postexercise muscle glycogen synthesis: carbohydrate supplementation and the application of amino acid or protein hydrolysate mixtures. *Am J Clin Nutr* 72

(1):106-111

第 12 講

- Kentta G, Hassmen P (1998) Overtraining and recovery. A conceptual model. *Sports Med* 26 (1):1-16. doi:10.2165/00007256-199826010-00001
- Halsen SL, Bridge MW, Meeusen R, Busschaert B, Gleeson M, Jones DA, Jeukendrup AE (2002) Time course of performance changes and fatigue markers during intensified training in trained cyclists. *J Appl Physiol* 93 (3):947-956. doi:10.1152/jappphysiol.01164.2001
- Rice SM, Purcell R, De Silva S, Mawren D, McGorry PD, Parker AG (2016) The mental health of elite athletes: A narrative systematic review. *Sports Med* 46 (9):1333-1353. doi:10.1007/s40279-016-0492-2
- Botonis PG, Toubekis AG (2023) Intensified olympic preparation: Sleep and training-related hormonal and immune responses in water polo. *Int J Sports Physiol Perform* 18 (2):187-194. doi:10.1123/ijsp.2022-0079
- Hasegawa Y, Ijichi T, Kurosawa Y, Hamaoka T, Goto K (2015) Planned overreaching and subsequent short-term detraining enhance cycle sprint performance. *Int J Sports Med* 36 (8):666-671. doi:10.1055/s-0034-1390466
- Winsley R, Matos N (2011) Overtraining and elite young athletes. *Med Sport Sci* 56:97-105. doi:10.1159/000320636
- Halsen SL, Jeukendrup AE (2004) Does overtraining exist? An analysis of overreaching and overtraining research. *Sports Med* 34 (14):967-981. doi:10.2165/00007256-200434140-00003
- Armstrong LE, VanHeest JL (2002) The unknown mechanism of the overtraining syndrome: clues from depression and psychoneuroimmunology. *Sports Med* 32 (3):185-209. doi:10.2165/00007256-200232030-00003

第 13 講

- Faria EW, Parker DL, Faria IE (2005) The science of cycling: physiology and training - part 1. *Sports Med* 35 (4):285-312. doi:10.2165/00007256-200535040-00002
- Bosquet L, Montpetit J, Arvisais D, Mujika I (2007) Effects of tapering on performance: a meta-analysis. *Med Sci Sports Exerc* 39 (8):1358-1365. doi:10.1249/mss.0b013e31806010e0
- Bosquet L, Montpetit J, Arvisais D, Mujika I (2007) Effects of tapering on performance: a meta-analysis. *Med Sci Sports Exerc* 39 (8):1358-1365.

doi:10.1249/mss.0b013e31806010e0

- Stone MJ, Knight CJ, Hall R, Shearer C, Nicholas R, Shearer DA (2023) The psychology of athletic tapering in sport: A scoping review. *Sports Med* 53 (4):777-801. doi:10.1007/s40279-022-01798-6
- Houmard JA, Scott BK, Justice CL, Chenier TC (1994) The effects of taper on performance in distance runners. *Med Sci Sports Exerc* 26 (5):624-631. doi: 10.1249/00005768-199405000-00016
- Trappe S, Costill D, Thomas R (2000) Effect of swim taper on whole muscle and single muscle fiber contractile properties. *Med Sci Sports Exerc* 32 (12):48-56. doi: 10.1097/00005768-200101000-00009
- O'Connor PJ, Morgan WP, Raglin JS, Barksdale CM, Kalin NH (1989) Mood state and salivary cortisol levels following overtraining in female swimmers. *Psychoneuroendocrinology* 14 (4):303-310. doi:10.1016/0306-4530(89)90032-2
- Raglin JS, Morgan WP, O'Connor PJ (1991) Changes in mood states during training in female and male college swimmers. *Int J Sports Med* 12 (6):585-589. doi:10.1055/s-2007-1024739
- Margaritis I, Palazzetti S, Rousseau AS, Richard MJ, Favier A (2003) Antioxidant supplementation and tapering exercise improve exercise-induced antioxidant response. *J Am Coll Nutr* 22 (2):147-156. doi:10.1080/07315724.2003.10719288
- Berglund B, Safstrom H (1994) Psychological monitoring and modulation of training load of world-class canoeists. *Med Sci Sports Exerc* 26 (8):1036-1040. doi: org/10.1249/00005768-199408000-00016

第 14 講

- Ihsan M, Watson G, Abbiss CR (2016) What are the physiological mechanisms for post-exercise cold water immersion in the recovery from prolonged endurance and intermittent exercise? *Sports Med* 46 (8):1095-1109. doi:10.1007/s40279-016-0483-3
- Mawhinney C, Low DA, Jones H, Green DJ, Costello JT, Gregson W (2017) Cold water mediates greater reductions in limb blood flow than whole body cryotherapy. *Med Sci Sports Exerc* 49 (6):1252-1260. doi:10.1249/MSS.0000000000001223
- Poignard M, Guilhem G, Jubeau M, Martin E, Giol T, Montalvan B, Bieuzen F (2023) Cold-water immersion and whole-body cryotherapy attenuate muscle soreness during 3 days of match-like tennis protocol. *Eur J Appl Physiol* 123 (9):1895-1909. doi:10.1007/s00421-023-05190-8
- Leeder J, Gissane C, van Someren K, Gregson W, Howatson G (2012) Cold water

immersion and recovery from strenuous exercise: a meta-analysis. *Br J Sports Med* 46 (4):233-240. doi:10.1136/bjsports-2011-090061

Moore E, Fuller JT, Bellenger CR, Saunders S, Halson SL, Broatch JR, Buckley JD (2023) Effects of cold-water immersion compared with other recovery modalities on athletic performance following acute strenuous exercise in physically active participants: A systematic review, meta-analysis, and meta-regression. *Sports Med* 53 (3):687-705. doi:10.1007/s40279-022-01800-1

Roberts LA, Nosaka K, Coombes JS, Peake JM (2014) Cold water immersion enhances recovery of submaximal muscle function after resistance exercise. *Am J Physiol Regul Integr Comp Physiol* 307 (8):R998-R1008. doi:10.1152/ajpregu.00180.2014

Solsona R, Meline T, Borrani F, Deriaz R, Lacroix J, Normand-Gravier T, Candau R, Racinais S, Sanchez AM (2023) Active recovery vs hot- or cold-water immersion for repeated sprint ability after a strenuous exercise training session in elite skaters. *J Sports Sci* 41 (11):1126-1135. doi:10.1080/02640414.2023.2259267

Steward CJ, Hill M, Menzies C, Bailey SJ, Rahman M, Thake CD, Pugh CJA, Cullen T (2024) Post exercise hot water immersion and hot water immersion in isolation enhance vascular, blood marker, and perceptual responses when compared to exercise alone. *Scand J Med Sci Sports* 34 (3):e14600. doi:10.1111/sms.14600

Cheng AJ, Willis SJ, Zinner C, Chaillou T, Ivarsson N, Ortenblad N, Lanner JT, Holmberg HC, Westerblad H (2017) Post-exercise recovery of contractile function and endurance in humans and mice is accelerated by heating and slowed by cooling skeletal muscle. *J Physiol* 595 (24):7413-7426. doi:10.1113/JP274870

第 15 講

MacRae BA, Cotter JD, Laing RM (2011) Compression garments and exercise: garment considerations, physiology and performance. *Sports Med* 41 (10):815-843. doi:10.2165/11591420-000000000-00000

Mizuno S, Arai M, Todoko F, Yamada E, Goto K (2017) Wearing lower-body compression garment with medium pressure impaired exercise-induced performance decrement during prolonged running. *PLoS One* 12 (5):e0178620. doi:10.1371/journal.pone.0178620

Mizuno S, Morii I, Tsuchiya Y, Goto K (2016) Wearing compression garment after endurance exercise promotes recovery of exercise performance. *Int J Sports Med* 37 (11):870-877. doi:10.1055/s-0042-106301

Mizuno S, Arai M, Todoko F, Yamada E, Goto K (2017) Wearing compression tights on

- the thigh during prolonged running attenuated exercise-induced increase in muscle damage marker in blood. *Front Physiol* 8:834. doi:10.3389/fphys.2017.00834
- Lee DCW, Ali A, Sheridan S, Chan DKC, Wong SHS (2022) Wearing compression garment enhances central hemodynamics? A systematic review and meta-analysis. *J Strength Cond Res* 36 (8):2349-2359. doi:10.1519/JSC.0000000000003801
- Goto K, Morishima T (2014) Compression garment promotes muscular strength recovery after resistance exercise. *Med Sci Sports Exerc* 46 (12):2265-2270. doi:10.1249/MSS.0000000000000359
- Hill J, Howatson G, van Someren K, Leeder J, Pedlar C (2014) Compression garments and recovery from exercise-induced muscle damage: a meta-analysis. *Br J Sports Med* 48 (18):1340-1346. doi:10.1136/bjsports-2013-092456
- Hill J, Howatson G, van Someren K, Gaze D, Legg H, Lineham J, Pedlar C (2017) The effects of compression-garment pressure on recovery after strenuous exercise. *Int J Sports Physiol Perform* 12 (8):1078-1084. doi:10.1123/ijsp.2016-0380

第 16 講

- Wunderlich CA (1871) *Medical thermometry, and human temperature*. New York: William Wood & Co.1876.
- Waterhouse J, Drust B, Weinert D, Edwards B, Gregson W, Atkinson G, Kao S, Aizawa S, Reilly T (2005) The circadian rhythm of core temperature: origin and some implications for exercise performance. *Chronobiol Int* 22 (2):207-225. doi:10.1081/cbi-200053477
- Ogata H, Horie M, Kayaba M, Tanaka Y, Ando A, Park I, Zhang S, Yajima K, Shoda JI, Omi N, Kaneko M, Kiyono K, Satoh M, Tokuyama K (2020) Skipping breakfast for 6 days delayed the circadian rhythm of the body temperature without altering clock gene expression in human leukocytes. *Nutrients* 12 (9). doi:10.3390/nu12092797
- Facer-Childs E, Brandstaetter R (2015) The impact of circadian phenotype and time since awakening on diurnal performance in athletes. *Curr Biol* 25 (4):518-522. doi:10.1016/j.cub.2014.12.036
- Machado FS, Rodvalho GV, Coimbra CC (2015) The time of day differently influences fatigue and locomotor activity: is body temperature a key factor? *Physiol Behav* 140:8-14. doi:10.1016/j.physbeh.2014.11.069
- Chtourou H, Souissi N (2012) The effect of training at a specific time of day: a review. *J Strength Cond Res* 26 (7):1984-2005. doi:10.1519/JSC.0b013e31825770a7
- Cullen ML, Casazza GA, Davis BA (2021) Passive recovery strategies after exercise: A

narrative literature review of the current evidence. *Curr Sports Med Rep* 20 (7):351-358. doi:10.1249/JSR.0000000000000859

Atkinson G, Reilly T (1996) Circadian variation in sports performance. *Sports Med* 21 (4):292-312. doi:10.2165/00007256-199621040-00005

第 17 講

川原貴 (2015) 女性アスリートの貧血. *産と婦* 82 (3):271-276.

Sim M, Garvican-Lewis LA, Cox GR, Govus A, McKay AKA, Stellingwerff T, Peeling P (2019) Iron considerations for the athlete: a narrative review. *Eur J Appl Physiol* 119 (7):1463-1478. doi:10.1007/s00421-019-04157-y

Hinton PS (2014) Iron and the endurance athlete. *Appl Physiol Nutr Metab* 39 (9):1012-1018. doi:10.1139/apnm-2014-0147

McInnis MD, Newhouse IJ, von Duvillard SP, Thayer R (1998) The effect of exercise intensity on hematuria in healthy male runners. *Eur J Appl Physiol Occup Physiol* 79 (1):99-105. doi:10.1007/s004210050480

Peeling P, Dawson B, Goodman C, Landers G, Wiegerinck ET, Swinkels DW, Trinder D (2009) Training surface and intensity: inflammation, hemolysis, and hepcidin expression. *Med Sci Sports Exerc* 41 (5):1138-1145. doi:10.1249/MSS.0b013e318192ce58

Peeling P (2010) Exercise as a mediator of hepcidin activity in athletes. *Eur J Appl Physiol* 110 (5):877-883. doi:10.1007/s00421-010-1594-4

Kashima H, Harada N, Miyamoto K, Fujimoto M, Fujita C, Endo MY, Kobayashi T, Miura A, Fukuba Y (2017) Timing of postexercise carbohydrate-protein supplementation: roles of gastrointestinal blood flow and mucosal cell damage on gastric emptying in humans. *J Appl Physiol* (1985) 123 (3):606-613. doi:10.1152/jappphysiol.00247.2017

Ishibashi A, Maeda N, Sumi D, Goto K (2017) Elevated serum hepcidin levels during an intensified training period in well-trained female long-distance runners. *Nutrients* 9 (3). doi:10.3390/nu9030277

Diaz V, Peinado AB, Barba-Moreno L, Altamura S, Butragueno J, Gonzalez-Gross M, Altheld B, Stehle P, Zapico AG, Muckenthaler MU, Gassmann M (2015) Elevated hepcidin serum level in response to inflammatory and iron signals in exercising athletes is independent of moderate supplementation with vitamin C and E. *Physiol Rep* 3 (8). doi:10.14814/phy2.12475

Badenhorst CE, Goto K, O'Brien WJ, Sims S (2021) Iron status in athletic females, a

shift in perspective on an old paradigm. *J Sports Sci*:1-11.
doi:10.1080/02640414.2021.1885782

第 18 講

能瀬さやか (2018) Health management for female athletes-女性アスリートのための
の月経対策ハンドブック Ver.3.

Nielsen P, Nachtigall D (1998) Iron supplementation in athletes. *Current
recommendations. Sports Med* 26 (4):207-216.

doi:10.2165/00007256-199826040-00001

Andrews NC (1999) Disorders of iron metabolism. *N Engl J Med* 341 (26):1986-1995.
doi:10.1056/NEJM199912233412607

Alfaro-Magallanes VM, Barba-Moreno L, Romero-Parra N, Rael B, Benito PJ,
Swinkels DW, Laarakkers CM, Diaz AE, Peinado AB, Iron FSG (2022) Menstrual
cycle affects iron homeostasis and hepcidin following interval running exercise in
endurance-trained women. *Eur J Appl Physiol* 122 (12):2683-2694.
doi:10.1007/s00421-022-05048-5

Petkus DL, Murray-Kolb LE, De Souza MJ (2017) The unexplored crossroads of the
female athlete triad and iron deficiency: A narrative review. *Sports Med* 47
(9):1721-1737. doi:10.1007/s40279-017-0706-2

Brook EM, Tenforde AS, Broad EM, Matzkin EG, Yang HY, Collins JE, Blauwet CA
(2019) Low energy availability, menstrual dysfunction, and impaired bone health: A
survey of elite para athletes. *Scand J Med Sci Sports* 29 (5):678-685.

doi:10.1111/sms.13385

第 19 講

OECD, Gender data portal 2021: Time use across the world

厚生労働省 令和元年国民健康・栄養調査報告 (2020)

Monma T, Ando A, Asanuma T, Yoshitake Y, Yoshida G, Miyazawa T, Ebine N, Takeda
S, Omi N, Satoh M, Tokuyama K, Takeda F (2018) Sleep disorder risk factors among
student athletes. *Sleep Med* 44:76-81. doi:10.1016/j.sleep.2017.11.1130

Mamiya A, Morii I, Goto K (2021) Effects of partial sleep deprivation after prolonged
exercise on metabolic responses and exercise performance on the following day. *Phys
Act Nutr* 25 (1):1-6. doi:10.20463/pan.2021.0001

Mougin F, Bourdin H, Simon-Rigaud ML, Nguyen NU, Kantelip JP, Davenne D (2001)
Hormonal responses to exercise after partial sleep deprivation and after a hypnotic

- drug-induced sleep. *J Sports Sci* 19 (2):89-97. doi:10.1080/026404101300036253
- Chaput JP, Despres JP, Bouchard C, Tremblay A (2012) Longer sleep duration associates with lower adiposity gain in adult short sleepers. *Int J Obes (Lond)* 36 (5):752-756. doi:10.1038/ijo.2011.110
- Taheri S, Lin L, Austin D, Young T, Mignot E (2004) Short sleep duration is associated with reduced leptin, elevated ghrelin, and increased body mass index. *PLoS Med* 1 (3):e62. doi:10.1371/journal.pmed.0010062
- Schmid SM, Hallschmid M, Jauch-Chara K, Born J, Schultes B (2008) A single night of sleep deprivation increases ghrelin levels and feelings of hunger in normal-weight healthy men. *J Sleep Res* 17 (3):331-334. doi:10.1111/j.1365-2869.2008.00662.x
- Brondel L, Romer MA, Nougues PM, Touyarou P, Davenne D (2010) Acute partial sleep deprivation increases food intake in healthy men. *Am J Clin Nutr* 91 (6):1550-1559. doi: 10.3945/ajcn.2009.28523
- Simpson NS, Gibbs EL, Matheson GO (2017) Optimizing sleep to maximize performance: implications and recommendations for elite athletes. *Scand J Med Sci Sports* 27 (3):266-274. doi:10.1111/sms.12703
- Vitale KC, Owens R, Hopkins SR, Malhotra A (2019) Sleep hygiene for optimizing recovery in athletes: Review and recommendations. *Int J Sports Med* 40 (8):535-543. doi:10.1055/a-0905-3103

第 20 講

- Wunderlich CA (1871) *Medical thermometry, and human temperature*. New York: William Wood & Co.1876.
- Cummins C, Orr R, O'Connor H, West C (2013) Global positioning systems (GPS) and microtechnology sensors in team sports: a systematic review. *Sports Med* 43 (10):1025-1042. doi:10.1007/s40279-013-0069-2
- Cintineo HP, Bello ML, Walker AJ, Chandler AJ, McFadden BA, Arent SM (2024) Monitoring training, performance, biomarkers, and psychological state throughout a competitive season: a case study of a triathlete. *Eur J Appl Physiol* 124 (6):1895-1910. doi:10.1007/s00421-023-05414-x
- Clavel P, Leduc C, Morin JB, Owen C, Samozino P, Peeters A, Buchheit M, Lacombe M (2022) Concurrent validity and reliability of sprinting force-velocity profile assessed with GPS devices in elite athletes. *Int J Sports Physiol Perform* 17 (10):1527-1531. doi:10.1123/ijsp.2021-0339
- Harper DJ, Carling C, Kiely J (2019) High-intensity acceleration and deceleration

demands in elite team sports competitive match play: A systematic review and meta-analysis of observational studies. *Sports Med* 49 (12):1923-1947. doi:10.1007/s40279-019-01170-1

Bastida-Castillo A, Gomez-Carmona CD, De La Cruz Sanchez E, Pino-Ortega J (2019) Comparing accuracy between global positioning systems and ultra-wideband-based position tracking systems used for tactical analyses in soccer. *Eur J Sport Sci* 19 (9):1157-1165. doi:10.1080/17461391.2019.1584248

第 21 講

Nedelec M, McCall A, Carling C, Legall F, Berthoin S, Dupont G (2012) Recovery in soccer: part I - post-match fatigue and time course of recovery. *Sports Med* 42 (12):997-1015. doi:10.2165/11635270-000000000-00000

Nedelec M, McCall A, Carling C, Legall F, Berthoin S, Dupont G (2013) Recovery in soccer : part ii-recovery strategies. *Sports Med* 43 (1):9-22. doi:10.1007/s40279-012-0002-0

Bangsbo J, Iaia FM, Krstrup P (2007) Metabolic response and fatigue in soccer. *Int J Sports Physiol Perform* 2 (2):111-127. doi:10.1123/ijsp.2.2.111

Thomas DT, Erdman KA, Burke LM (2016) American College of Sports Medicine joint position statement. Nutrition and athletic performance. *Med Sci Sports Exerc* 48 (3):543-568. doi:10.1249/MSS.0000000000000852

Ojala T, Hakkinen K (2013) Effects of the tennis tournament on players' physical performance, hormonal responses, muscle damage and recovery. *J Sports Sci Med* 12 (2):240-248

Clarke AC, Anson JM, Pyne DB (2015) Neuromuscular fatigue and muscle damage after a women's rugby sevens tournament. *Int J Sports Physiol Perform* 10 (6):808-814. doi:10.1123/ijsp.2014-0590

Ivy JL, Katz AL, Cutler CL, Sherman WM, Coyle EF (1988) Muscle glycogen synthesis after exercise: effect of time of carbohydrate ingestion. *J Appl Physiol* (1985) 64 (4):1480-1485. doi:10.1152/jappl.1988.64.4.1480

Ivy JL, Goforth HW, Damon BM, McCauley TR, Parsons EC, Price TB (2002) Early postexercise muscle glycogen recovery is enhanced with a carbohydrate-protein supplement. *J Appl Physiol* (1985) 93 (4):1337-1344. doi:10.1152/jappphysiol.00394.2002

第 22 講

厚生労働省 日本人の食事摂取基準 (2020 年版)

- Mountjoy M, Ackerman KE, Bailey DM, Burke LM, Constantini N, Hackney AC, Heikura IA, Melin A, Pensgaard AM, Stellingwerff T, Sundgot-Borgen JK, Torstveit MK, Jacobsen AU, Verhagen E, Budgett R, Engebretsen L, Erdener U (2023) 2023 International Olympic Committee's (IOC) consensus statement on relative energy deficiency in sport (REDs). *Br J Sports Med* 57 (17):1073-1097. doi:10.1136/bjsports-2023-106994
- Pensgaard AM, Sundgot-Borgen J, Edwards C, Jacobsen AU, Mountjoy M (2023) Intersection of mental health issues and relative energy deficiency in sport (REDs): a narrative review by a subgroup of the IOC consensus on REDs. *Br J Sports Med* 57 (17):1127-1135. doi:10.1136/bjsports-2023-106867
- Mathisen TF, Ackland T, Burke LM, Constantini N, Haudum J, Macnaughton LS, Meyer NL, Mountjoy M, Slater G, Sundgot-Borgen J (2023) Best practice recommendations for body composition considerations in sport to reduce health and performance risks: a critical review, original survey and expert opinion by a subgroup of the IOC consensus on relative energy deficiency in sport (REDs). *Br J Sports Med* 57 (17):1148-1158. doi:10.1136/bjsports-2023-106812
- Melin AK, Heikura IA, Tenforde A, Mountjoy M (2019) Energy availability in athletics: health, performance, and physique. *Int J Sport Nutr Exerc Metab* 29 (2):152-164. doi:10.1123/ijsnem.2018-0201
- Heikura IA, Stellingwerff T, Areta JL (2022) Low energy availability in female athletes: From the lab to the field. *Eur J Sport Sci* 22 (5):709-719. doi:10.1080/17461391.2021.1915391
- Dipla K, Kraemer RR, Constantini NW, Hackney AC (2021) Relative energy deficiency in sports (RED-S): elucidation of endocrine changes affecting the health of males and females. *Hormones (Athens)* 20 (1):35-47. doi:10.1007/s42000-020-00214-w
- Ackerman KE, Misra M (2018) Amenorrhoea in adolescent female athletes. *Lancet Child Adolesc Health* 2 (9):677-688. doi:10.1016/S2352-4642(18)30145-7

第 23 講

- Burke LM (2007) Nutrition strategies for the marathon: fuel for training and racing. *Sports Med* 37 (4-5):344-347. doi:10.2165/00007256-200737040-00018
- Jeukendrup A (2014) A step towards personalized sports nutrition: carbohydrate intake during exercise. *Sports Med* 44 Suppl 1 (Suppl 1):S25-33. doi:10.1007/s40279-014-0148-z
- Gonzalez JT, Fuchs CJ, Betts JA, van Loon LJ (2016) Liver glycogen metabolism

during and after prolonged endurance-type exercise. *Am J Physiol Endocrinol Metab* 311 (3):E543-553. doi:10.1152/ajpendo.00232.2016

Coggan AR, Coyle EF (1991) Carbohydrate ingestion during prolonged exercise: effects on metabolism and performance. *Exerc Sport Sci Rev* 19:1-40

Sherman W (1991) Carbohydrates, muscle glycogen, and muscle glycogen supercompensation. In: *Perspectives in Exercise Science and Sports Medicine*, edited by Williams M Champaign

Sherman W (1991) Carbohydrate feedings before and after exercise. In: *Perspectives in Exercise Science and Sports Medicine*, edited by Williams M Champaign

第 24 講

Kerksick CM, Arent S, Schoenfeld BJ, Stout JR, Campbell B, Wilborn CD, Taylor L, Kalman D, Smith-Ryan AE, Kreider RB, Willoughby D, Arciero PJ, VanDusseldorp TA, Ormsbee MJ, Wildman R, Greenwood M, Ziegenfuss TN, Aragon AA, Antonio J (2017) International society of sports nutrition position stand: nutrient timing. *J Int Soc Sports Nutr* 14:33. doi:10.1186/s12970-017-0189-4

Phillips SM, Tipton KD, Aarsland A, Wolf SE, Wolfe RR (1997) Mixed muscle protein synthesis and breakdown after resistance exercise in humans. *Am J Physiol* 273 (1 Pt 1):E99-107. doi:10.1152/ajpendo.1997.273.1.E99

Kumar V, Selby A, Rankin D, Patel R, Atherton P, Hildebrandt W, Williams J, Smith K, Seynnes O, Hiscock N, Rennie MJ (2009) Age-related differences in the dose-response relationship of muscle protein synthesis to resistance exercise in young and old men. *J Physiol* 587 (1):211-217. doi:10.1113/jphysiol.2008.164483

Kumar V, Atherton P, Smith K, Rennie MJ (2009) Human muscle protein synthesis and breakdown during and after exercise. *J Appl Physiol* (1985) 106 (6):2026-2039. doi:10.1152/jappphysiol.91481.2008

Kashima H, Sugimura K, Taniyawa K, Kondo R, Endo MY, Tanimoto S, Kobayashi T, Miura A, Fukuba Y (2018) Timing of post-resistance exercise nutrient ingestion: effects on gastric emptying and glucose and amino acid responses in humans. *Br J Nutr* 120 (9):995-1005. doi:10.1017/S0007114518002398

Areta JL, Burke LM, Ross ML, Camera DM, West DW, Broad EM, Jeacocke NA, Moore DR, Stellingwerff T, Phillips SM, Hawley JA, Coffey VG (2013) Timing and distribution of protein ingestion during prolonged recovery from resistance exercise alters myofibrillar protein synthesis. *J Physiol* 591 (9):2319-2331. doi:10.1113/jphysiol.2012.244897

Yasuda J, Asako M, Arimitsu T, Fujita S (2019) Association of protein intake in three meals with muscle mass in healthy young subjects: A cross-sectional study. *Nutrients* 11 (3). doi:10.3390/nu11030612

第 25 講

Broom DR, Miyashita M, Wasse LK, Pulsford R, King JA, Thackray AE, Stensel DJ (2017) Acute effect of exercise intensity and duration on acylated ghrelin and hunger in men. *J Endocrinol* 232 (3):411-422. doi:10.1530/JOE-16-0561

King NA, Burley VJ, Blundell JE (1994) Exercise-induced suppression of appetite: effects on food intake and implications for energy balance. *Eur J Clin Nutr* 48 (10):715-724

Wasse LK, Sunderland C, King JA, Batterham RL, Stensel DJ (2012) Influence of rest and exercise at a simulated altitude of 4,000 m on appetite, energy intake, and plasma concentrations of acylated ghrelin and peptide YY. *J Appl Physiol* (1985) 112 (4):552-559. doi:10.1152/jappphysiol.00090.2011

志村信廣、森嶋琢真、長谷川裕太、佐々木裕人、土屋吉史、後藤一成 (2014) 特性の異なるレジスタンス運動が食欲調節に及ぼす影響. *体力科学* 63 (6): 593.

Kashima H, Sugimura K, Taniyawa K, Kondo R, Endo MY, Tanimoto S, Kobayashi T, Miura A, Fukuba Y (2018) Timing of post-resistance exercise nutrient ingestion: effects on gastric emptying and glucose and amino acid responses in humans. *Br J Nutr* 120 (9):995-1005. doi:10.1017/S0007114518002398

Keirns BH, Koemel NA, Sciarrillo CM, Anderson KL, Emerson SR (2020) Exercise and intestinal permeability: another form of exercise-induced hormesis? *Am J Physiol Gastrointest Liver Physiol* 319 (4):G512-G518. doi:10.1152/ajpgi.00232.2020

Halse RE, Wallman KE, Guelfi KJ (2011) Postexercise water immersion increases short-term food intake in trained men. *Med Sci Sports Exerc* 43 (4):632-638. doi:10.1249/MSS.0b013e3181f55d2e

Millet J, Siracusa J, Tardo-Dino PE, Thivel D, Koulmann N, Malgoyre A, Charlot K (2021) Effects of acute heat and cold exposures at rest or during exercise on subsequent energy intake: A systematic review and meta-analysis. *Nutrients* 13 (10). doi:10.3390/nu13103424

Charlot K, Faure C, Antoine-Jonville S (2017) Influence of hot and cold environments on the regulation of energy balance following a single exercise session: A mini-review. *Nutrients* 9 (6). doi:10.3390/nu9060592

Kojima C, Kasai N, Kondo C, Ebi K, Goto K (2018) Post-exercise whole body

cryotherapy (-140°C) increases energy intake in athletes. *Nutrients* 10 (7).
doi:10.3390/nu10070893

第 26 講

Costa RJS, Mika AS, McCubbin AJ (2022) The impact of exercise modality on exercise-induced gastrointestinal syndrome and associated gastrointestinal symptoms. *J Sci Med Sport* 25 (10):788-793. doi:10.1016/j.jsams.2022.07.003

Costa RJS, Young P, Gill SK, Snipe RMJ, Gaskell S, Russo I, Burke LM (2022) Assessment of exercise-associated gastrointestinal perturbations in research and practical settings: Methodological concerns and recommendations for best practice. *Int J Sport Nutr Exerc Metab* 32 (5):387-418. doi:10.1123/ijsnem.2022-0048

Henningsen K, Mika A, Alcock R, Gaskell SK, Parr A, Rauch C, Russo I, Snipe RMJ, Costa RJS (2024) The increase in core body temperature in response to exertional-heat stress can predict exercise-induced gastrointestinal syndrome. *Temperature (Austin)* 11 (1):72-91. doi:10.1080/23328940.2023.2213625

Martinez IG, Mika AS, Biesiekierski JR, Costa RJS (2023) The effect of gut-training and feeding-challenge on markers of gastrointestinal status in response to endurance exercise: A systematic literature review. *Sports Med* 53 (6):1175-1200. doi:10.1007/s40279-023-01841-0

Sumi D, Okazaki K, Goto K (2024) Gastrointestinal function following endurance exercise under different environmental temperatures. *Eur J Appl Physiol* 124 (5):1601-1608. doi:10.1007/s00421-023-05387-x

Miall A, Khoo A, Rauch C, Snipe RMJ, Camoes-Costa VL, Gibson PR, Costa RJS (2018) Two weeks of repetitive gut-challenge reduce exercise-associated gastrointestinal symptoms and malabsorption. *Scand J Med Sci Sports* 28 (2):630-640. doi:10.1111/sms.12912

Costa RJS, Miall A, Khoo A, Rauch C, Snipe R, Camoes-Costa V, Gibson P (2017) Gut-training: the impact of two weeks repetitive gut-challenge during exercise on gastrointestinal status, glucose availability, fuel kinetics, and running performance. *Appl Physiol Nutr Metab* 42 (5):547-557. doi:10.1139/apnm-2016-0453

第 27 講

厚生労働省 日本人の食事摂取基準 (2020 年版) .

Craig WJ (1994) Iron status of vegetarians. *Am J Clin Nutr* 59 (5 Suppl):1233S-1237S. doi:10.1093/ajcn/59.5.1233S

- Brune M, Rossander L, Hallberg L (1989) Iron absorption and phenolic compounds: importance of different phenolic structures. *Eur J Clin Nutr* 43 (8):547-557
- Troutt JS, Rudling M, Persson L, Stahle L, Angelin B, Butterfield AM, Schade AE, Cao G, Konrad RJ (2012) Circulating human hepcidin-25 concentrations display a diurnal rhythm, increase with prolonged fasting, and are reduced by growth hormone administration. *Clin Chem* 58 (8):1225-1232. doi:10.1373/clinchem.2012.186866
- McCormick R, Moretti D, McKay AKA, Laarakkers CM, Vanswelm R, Trinder D, Cox GR, Zimmerman MB, Sim M, Goodman C, Dawson B, Peeling P (2019) The impact of morning versus afternoon exercise on iron absorption in athletes. *Med Sci Sports Exerc* 51 (10):2147-2155. doi:10.1249/MSS.0000000000002026
- Moretti D, Goede JS, Zeder C, Jiskra M, Chatzinakou V, Tjalsma H, Melse-Boonstra A, Brittenham G, Swinkels DW, Zimmermann MB (2015) Oral iron supplements increase hepcidin and decrease iron absorption from daily or twice-daily doses in iron-depleted young women. *Blood* 126 (17):1981-1989. doi:10.1182/blood-2015-05-642223
- Barney DE, Ippolito JR, Berryman CE, Hennigar SR (2022) A prolonged bout of running increases hepcidin and decreases dietary iron absorption in trained female and male runners. *J Nutr* 152 (9):2039-2047. doi:10.1093/jn/nxac129
- Murakami K, Shinozaki N, Livingstone MBE, Fujiwara A, Asakura K, Masayasu S, Sasaki S (2022) Characterisation of breakfast, lunch, dinner and snacks in the Japanese context: an exploratory cross-sectional analysis. *Public Health Nutr* 25 (3):689-701. doi:10.1017/S1368980020004310
- Schaap CC, Hendriks JC, Kortman GA, Klaver SM, Kroot JJ, Laarakkers CM, Wiegerinck ET, Tjalsma H, Janssen MC, Swinkels DW (2013) Diurnal rhythm rather than dietary iron mediates daily hepcidin variations. *Clin Chem* 59 (3):527-535. doi:10.1373/clinchem.2012.194977

第 28 講

- Shiose K, Takahashi H, Yamada Y (2022) Muscle glycogen assessment and relationship with body hydration status: A narrative review. *Nutrients* 15 (1). doi:10.3390/nu15010155
- Pavy FW (1860) Researches on sugar formation in the liver. *Philos Trans R Soc Lond* 150:595-609. doi: org/10.1098/rstl.1860.0027
- Puckett H.L. W, F.H. (1932) The relation of glycogen to water storage in the liver. *J Biol Chem* 96:367-371

- MacKay EM, Bergman, H. (1934) The amount of water stored with glycogen in the liver. *J Biol Chem* 105:56-92
- Fenn W, Haege, L.F. (1940) The deposition of glycogen with water in the livers of cats. *J Biol Chem* 136:87-101
- McBride J, Guest, M.M., Scott, E. (1941) The storage of the major liver components; emphasizing the relationship of glycogen to water in the liver and the hydration of glycogen. *J Biol Chem* 139:943-952
- Whitfield J, Burke LM, McKay AKA, Heikura IA, Hall R, Fensham N, Sharma AP (2021) Acute ketogenic diet and ketone ester supplementation impairs race walk performance. *Med Sci Sports Exerc* 53 (4):776-784. doi:10.1249/MSS.0000000000002517
- Burke LM, Whitfield J, Heikura IA, Ross MLR, Tee N, Forbes SF, Hall R, McKay AKA, Walleit AM, Sharma AP (2021) Adaptation to a low carbohydrate high fat diet is rapid but impairs endurance exercise metabolism and performance despite enhanced glycogen availability. *J Physiol* 599 (3):771-790. doi:10.1113/JP280221
- Shaw DM, Merien F, Braakhuis A, Maunder ED, Dulson DK (2019) Effect of a ketogenic diet on submaximal exercise capacity and efficiency in runners. *Med Sci Sports Exerc* 51 (10):2135-2146. doi:10.1249/MSS.0000000000002008
- 日本糖尿病学会 (2024) 健康食スタートブック-生活の質向上をめざして-
- Ishibashi A, Kojima C, Tanabe Y, Iwayama K, Hiroyama T, Tsuji T, Kamei A, Goto K, Takahashi H (2020) Effect of low energy availability during three consecutive days of endurance training on iron metabolism in male long distance runners. *Physiol Rep* 8 (12):e14494. doi:10.14814/phy2.14494
- Hayashi N, Ishibashi A, Iwata A, Yatsutani H, Badenhorst C, Goto K (2022) Influence of an energy deficient and low carbohydrate acute dietary manipulation on iron regulation in young females. *Physiol Rep* 10 (13):e15351. doi:10.14814/phy2.15351
- McKay AKA, Peeling P, Pyne DB, Tee N, Whitfield J, Sharma AP, Heikura IA, Burke LM (2021) Six days of low carbohydrate, not energy availability, alters the iron and immune response to exercise in elite athletes. *Med Sci Sports Exerc*. doi:10.1249/MSS.0000000000002819
- McKay AKA, Peeling P, Pyne DB, Welvaert M, Tee N, Leckey JJ, Sharma AP, Ross MLR, Garvican-Lewis LA, Swinkels DW, Laarakkers CM, Burke LM (2019) Chronic adherence to a ketogenic diet modifies iron metabolism in elite athletes. *Med Sci Sports Exerc* 51 (3):548-555. doi:10.1249/MSS.0000000000001816

第 29 講

- 日本スポーツ振興センター (2017) 競技者のための暑熱対策ガイドブック.
- 日本スポーツ振興センター (2020) 競技者のための暑熱対策ガイドブック (実践編) .
- Siegel R, Mate J, Brearley MB, Watson G, Nosaka K, Laursen PB (2010) Ice slurry ingestion increases core temperature capacity and running time in the heat. *Med Sci Sports Exerc* 42 (4):717-725. doi:10.1249/MSS.0b013e3181bf257a
- Onitsuka S, Nakamura D, Onishi T, Arimitsu T, Takahashi H, Hasegawa H (2018) Ice slurry ingestion reduces human brain temperature measured using non-invasive magnetic resonance spectroscopy. *Sci Rep* 8 (1):2757. doi:10.1038/s41598-018-21086-6
- Onitsuka S, Zheng X, Hasegawa H (2020) Ice slurry ingestion before and during exercise inhibit the increase in core and deep-forehead temperatures in the second half of the exercise in a hot environment. *J Therm Biol* 94:102760. doi:10.1016/j.jtherbio.2020.102760
- Naito T, Sagayama H, Akazawa N, Haramura M, Tasaki M, Takahashi H (2018) Ice slurry ingestion during break times attenuates the increase of core temperature in a simulation of physical demand of match-play tennis in the heat. *Temperature (Austin)* 5 (4):371-379. doi:10.1080/23328940.2018.1475989
- Takeshima K, Onitsuka S, Xinyan Z, Hasegawa H (2017) Effect of the timing of ice slurry ingestion for precooling on endurance exercise capacity in a warm environment. *J Therm Biol* 65:26-31. doi:10.1016/j.jtherbio.2017.01.010
- Iwata R, Kawamura T, Hosokawa Y, Chang L, Suzuki K, Muraoka I (2020) Differences between sexes in thermoregulatory responses and exercise time during endurance exercise in a hot environment following pre-cooling with ice slurry ingestion. *J Therm Biol* 94:102746. doi:10.1016/j.jtherbio.2020.102746
- Choo HC, Choo DHW, Tan I, Chang J, Chow KM, Lee JKW, Burns SF, Ihsan M (2023) Effect of ice slurry ingestion on thermoregulatory responses during fixed-intensity cycling in humid and dry heat. *Eur J Appl Physiol* 123 (10):2225-2237. doi:10.1007/s00421-023-05235-y

第 30 講

- Bishop D (2008) An applied research model for the sport sciences. *Sports Med* 38 (3):253-263. doi:10.2165/00007256-200838030-00005
- Gray SR, Ferguson C, Birch K, Forrest LJ, Gill JM (2016) High-intensity interval

training: key data needed to bridge the gap from laboratory to public health policy. *Br J Sports Med* 50 (20):1231-1232. doi:10.1136/bjsports-2015-095705

Shurley JP, Todd JS, Todd TC (2017) The science of strength: Reflections on the National Strength and Conditioning Association and the emergence of research-based strength and conditioning. *J Strength Cond Res* 31 (2):517-530. doi:10.1519/JSC.0000000000001676