

The world class athlete

MED5363, MED5350

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1.
Yang N, MacArthur DG, Gulbin JP, Hahn AG, Beggs AH, Easteal S, et al. ACTN3 Genotype Is Associated with Human Elite Athletic Performance. *The American Journal of Human Genetics*. 2003 Sep;73(3):627–31.

2.
Bouchard C, An P, Rice P, Skinner T, Wilmore JS, Gagnon J, et al. Familial aggregation of V̇_{o2} max response to exercise training: results from the HERITAGE Family Study. 87:1003–8. Available from:
<http://ezproxy.lib.gla.ac.uk/login?url=http://jap.physiology.org/content/87/3/1003.long>

3.
Tucker R, Collins M. What makes champions? A review of the relative contribution of genes and training to sporting success. *British Journal of Sports Medicine*. 2012 Jun;46(8):555–61.

4.
Webborn N, Williams A, McNamee M, Bouchard C, Pitsiladis Y, Ahmetov I, et al. Direct-to-consumer genetic testing for predicting sports performance and talent identification: Consensus statement. *British Journal of Sports Medicine*. 2015 Dec;49(23):1486–91.

5.
van der Gronde T, de Hon O, Haisma HJ, Pieters T. Gene doping: an overview and current implications for athletes. *British Journal of Sports Medicine*. 2013 Jul;47(11):670–8.

6.

Rankinen T, Zuberi A, Chagnon YC, Weisnagel SJ, Argyropoulos G, Walts B, et al. The Human Obesity Gene Map: The 2005 Update. *Obesity*. 2006 Apr;14(4):529–644.

7.

PÉRUSSE L, RANKINEN T, HAGBERG JM, LOOS RJF, ROTH SM, SARZYNSKI MA, et al. Advances in Exercise, Fitness, and Performance Genomics in 2012. *Medicine & Science in Sports & Exercise*. 2013 May;45(5):824–31.

8.

Bouchard C, Hoffman EP. Genetic and molecular aspects of sport performance [Internet]. Vol. v. 18. Chichester: Wiley-Blackwell; Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://onlinelibrary.wiley.com/doi/book/10.1002/9781444327335>

9.

Timmons JA, Knudsen S, Rankinen T, Koch LG, Sarzynski M, Jensen T, et al. Using molecular classification to predict gains in maximal aerobic capacity following endurance exercise training in humans. *Journal of Applied Physiology*. 2010 Jun 1;108(6):1487–96.

10.

Baggish AL, Hale A, Weiner RB, Lewis GD, Systrom D, Wang F, et al. Dynamic regulation of circulating microRNA during acute exhaustive exercise and sustained aerobic exercise training. *The Journal of Physiology*. 2011 Aug;589(16):3983–94.

11.

Thompson H. Performance enhancement: Superhuman athletes. *Nature*. 2012 Jul 19;487(7407):287–9.

12.

Battery L, Solomon A, Gould D. Gene doping: Olympic genes for Olympic dreams. *Journal of*

the Royal Society of Medicine. 2011 Dec;104(12):494-500.

13.

Barnett A. Using Recovery Modalities between Training Sessions in Elite Athletes. *Sports Medicine*. 2006;36(9):781-96.

14.

Samuels C. Sleep, Recovery, and Performance: The New Frontier in High-Performance Athletics. *Neurologic Clinics*. 2008 Feb;26(1):169-80.

15.

Mujika I, Padilla S, Pyne D, Busso T. Physiological Changes Associated with the Pre-Event Taper in Athletes. *Sports Medicine*. 2004;34(13):891-927.

16.

MUJIKAI I, PADILLA S. Scientific Bases for Precompetition Tapering Strategies. *Medicine & Science in Sports & Exercise*. 2003 Jul;35(7):1182-7.

17.

Bartlett JD, O'Connor F, Pitchford N, Torres-Ronda L, Robertson SJ. Relationships Between Internal and External Training Load in Team-Sport Athletes: Evidence for an Individualized Approach. *International Journal of Sports Physiology and Performance*. 2017 Feb;12(2):230-4.

18.

Malone S, Owen A, Newton M, Mendes B, Collins KD, Gabbett TJ. The acute:chronic workload ratio in relation to injury risk in professional soccer. *Journal of Science and Medicine in Sport*. 2016 Nov;

19.

Hoff J. Training and testing physical capacities for elite soccer players. *Journal of Sports*

Sciences. 2005 Jun;23(6):573–82.

20.

Windt J, Gabbett TJ, Ferris D, Khan KM. Training load--injury paradox: is greater preseason participation associated with lower in-season injury risk in elite rugby league players? *British Journal of Sports Medicine*. 2016 Apr 13;

21.

Maughan RJ, editor. *Nutrition in Sport*. Oxford, UK: Blackwell Science Ltd; 2000.

22.

Casajus JA. Seasonal variation in fitness variables in professional soccer player. *THE JOURNAL OF SPORTS MEDICINE AND PHYSICAL FITNESS* [Internet]. 2001;41(4):463–9. Available from: <https://www.minervamedica.it/en/journals/sports-med-physical-fitness/article.php?cod=R40Y2001N04A0463>

23.

Cooke MB, Rybalka E, Williams AD, Cribb PJ, Hayes A. Creatine supplementation enhances muscle force recovery after eccentrically-induced muscle damage in healthy individuals. *Journal of the International Society of Sports Nutrition*. 2009;6(1).

24.

Edge J, Bishop D, Goodman C. The effects of training intensity on muscle buffer capacity in females. *European Journal of Applied Physiology*. 2006 Jan;96(1):97–105.

25.

Erlacher D, Ehrlenspiel F, Adegbesan OA, Galal El-Din H. Sleep habits in German athletes before important competitions or games. *Journal of Sports Sciences*. 2011 May;29(8):859–66.

26.

FOSTER C, FLORHAUG JA, FRANKLIN J, GOTTSCHALL L, HROVATIN LA, PARKER S, et al. A New Approach to Monitoring Exercise Training. *Journal of Strength and Conditioning Research*. 2001 Feb;15(1):109–15.

27.

Gabbett TJ, Ullah S. Relationship Between Running Loads and Soft-Tissue Injury in Elite Team Sport Athletes. *Journal of Strength and Conditioning Research* [Internet]. 2012 Apr;26(4):953–60. Available from: http://journals.lww.com/nsca-jscr/Abstract/2012/04000/Relationship_Between_Running_Loads_and_Soft_Tissue.10.aspx

28.

Gabbett TJ, Jenkins DG. Relationship between training load and injury in professional rugby league players. *Journal of Science and Medicine in Sport*. 2011 May;14(3):204–9.

29.

Hoff J, Helgerud J. Endurance and Strength Training for Soccer Players. *Sports Medicine*. 2004;34(3):165–80.

30.

Juliff LE, Halson SL, Peiffer JJ. Understanding sleep disturbance in athletes prior to important competitions. *Journal of Science and Medicine in Sport*. 2015 Jan;18(1):13–8.

31.

Leeder J, Glaister M, Pizzoferro K, Dawson J, Pedlar C. Sleep duration and quality in elite athletes measured using wristwatch actigraphy. *Journal of Sports Sciences*. 2012 Mar;30(6):541–5.

32.

Maeda T, Yasukouchi A. Blood Lactate Disappearance during Breathing Hyperoxic Gas after Exercise in Two Different Physical Fitness Groups. On The Work Load Fixed at 70%VO₂max. *APPLIED HUMAN SCIENCE Journal of Physiological Anthropology*. 1997;16(6):249–55.

33.

The Effects of Sleep Extension on the Athletic Performance of Collegiate Basketball Players. *Sleep*. 2011 Jul 1;

34.

McMillan K. Lactate threshold responses to a season of professional British youth soccer. *British Journal of Sports Medicine*. 2005 Jul 1;39(7):432–6.

35.

Milewski MD, Skaggs DL, Bishop GA, Pace JL, Ibrahim DA, Wren TAL, et al. Chronic Lack of Sleep is Associated With Increased Sports Injuries in Adolescent Athletes. *Journal of Pediatric Orthopaedics* [Internet]. 2014 Mar;34(2):129–33. Available from: http://journals.lww.com/pedorthopaedics/Abstract/2014/03000/Chronic_Lack_of_Sleep_is_Associated_With_Increased.1.aspx

36.

Murray K, Sommerville A, McKenna M, Edgar G, Murray A. Normobaric hyperoxia training in elite female hockey players. *Journal of sports medicine and physical fitness*. 56(12):1488–93.

37.

Natal Rebelo A, Soares JM. The impact of soccer training on the immune system. 1995;35(3):258–71. Available from: <https://www.minervamedica.it/en/journals/sports-med-physical-fitness/archive.php?cod=R40>

38.

Peeling P, Andersson R. Effect of hyperoxia during the rest periods of interval training on perceptual recovery and oxygen re-saturation time. *Journal of Sports Sciences*. 2011 Jan;29(2):147–50.

39.

Robey E, Dawson B, Halson S, Gregson W, Goodman C, Eastwood P. Sleep quantity and quality in youth soccer players: A pilot study. *European Journal of Sport Science*. 2014 Jul 4;14(5):410–7.

40.

Rogalski B, Dawson B, Heasman J, Gabbett TJ. Training and game loads and injury risk in elite Australian footballers. *Journal of Science and Medicine in Sport*. 2013 Nov;16(6):499–503.

41.

Gibson N, Sommerville AD. Gender differences in sleep quality and quantity in national level swimmers [Internet]. BASES Conference/ *Journal of Sports Science*; Available from: <http://www.tandfonline.com/doi/full/10.1080/02640414.2014.968382?mobileUi=0>

42.

Sperlich B, Zinner C, Krueger M, Wegrzyk J, Achtzehn S, Holmberg HC. Effects of hyperoxia during recovery from 5×30-s bouts of maximal-intensity exercise. *Journal of Sports Sciences*. 2012 May;30(9):851–8.

43.

VAN ESSEN M, GIBALA MJ. Failure of Protein to Improve Time Trial Performance when Added to a Sports Drink. *Medicine & Science in Sports & Exercise*. 2006 Aug;38(8):1476–83.

44.

Burke LM, Hawley JA, Wong SHS, Jeukendrup AE. Carbohydrates for training and competition. *Journal of Sports Sciences*. 2011 Jan;29(sup1):S17–27.

45.

Mondazzi L, Arcelli E. Glycemic Index in Sport Nutrition. *Journal of the American College of Nutrition*. 2009 Aug;28(sup4):455S–463S.

46.

SAUNDERS MJ, KANE MD, TODD MK. Effects of a Carbohydrate-Protein Beverage on Cycling Endurance and Muscle Damage. *Medicine & Science in Sports & Exercise*. 2004 Jul;36(7):1233-8.

47.

Moore DR, Robinson MJ, Fry JL, Tang JE, Glover EI, Wilkinson SB, et al. Ingested protein dose response of muscle and albumin protein synthesis after resistance exercise in young men. *American Journal of Clinical Nutrition*. 2008 Dec 3;89(1):161-8.

48.

Pedersen DJ, Lessard SJ, Coffey VG, Churchley EG, Wootton AM, Ng T, et al. High rates of muscle glycogen resynthesis after exhaustive exercise when carbohydrate is coingested with caffeine. *Journal of Applied Physiology*. 2008 May 1;105(1):7-13.

49.

Robinson TM, Sewell DA, Hultman E, Greenhaff PL. Role of submaximal exercise in promoting creatine and glycogen accumulation in human skeletal muscle. *J Appl Physiol*. 1999;87(2):598-604. Available from: <http://jap.physiology.org/content/87/2/598.long>

50.

DeMARCO HM, SUCHER KP, CISAR CJ, BUTTERFIELD GE. Pre-exercise carbohydrate meals: application of glycemic index. *Medicine & Science in Sports & Exercise*. 1999 Jan;31(1):164-70.

51.

Jeukendrup AE, Killer SC. The Myths Surrounding Pre-Exercise Carbohydrate Feeding. *Annals of Nutrition and Metabolism*. 2010;57(s2):18-25.

52.

Tsintzas OK, Williams C, Boobis L, Greenhaff P. Carbohydrate ingestion and glycogen utilization in different muscle fibre types in man. *The Journal of Physiology*. 1995 Nov 15;489(1):243-50.

53.

Coyle EF, Coggan AR, Hemmert MK, Ivy JL. Muscle glycogen utilization during prolonged strenuous exercise when fed carbohydrate. 61(1):165–72. Available from: <http://jap.physiology.org/content/61/1/165.full.pdf+html>

54.

CARTER JM, JEUKENDRUP AE, JONES DA. The Effect of Carbohydrate Mouth Rinse on 1-h Cycle Time Trial Performance. *Medicine & Science in Sports & Exercise*. 2004 Dec;2107–11.

55.

Jeukendrup AE, Rollo I, Carter JM. Carbohydrate mouth rinse: performance effects and mechanisms. 26(1):1–8. Available from: <http://www.gssiweb.org/en/sports-science-exchange/article/sse-118-carbohydrate-mouth-rinse-performance-effects-and-mechanisms>

56.

Jeukendrup AE, Jentjens R. Oxidation of Carbohydrate Feedings During Prolonged Exercise. *Sports Medicine*. 2000;29(6):407–24.

57.

Hawley JA, Bosch AN, Weltan SM, Dennis SC, Noakes TD. Glucose kinetics during prolonged exercise in euglycaemic and hyperglycaemic subjects. *Pflügers Archiv European Journal of Physiology*. 1994 Mar;426(5):378–86.

58.

Jeukendrup AE. Multiple transportable carbohydrates and their benefits. 2013;26(108):1–5. Available from: https://sites.uni.edu/dolgner/Advanced_Sport_Nutrition/Electronic%20Articles/Fall%202014/Sport%20Nutrition%20Fall%202014/Multiple%20Transportable%20CHO.pdf

59.

CURRELL K, JEUKENDRUP AE. Superior Endurance Performance with Ingestion of Multiple Transportable Carbohydrates. *Medicine & Science in Sports & Exercise*. 2008 Feb;40(2):275-81.

60.

Jeukendrup AE. Nutrition for endurance sports: Marathon, triathlon, and road cycling. *Journal of Sports Sciences*. 2011 Jan;29(sup1):S91-9.

61.

Rowlands DS, Hopkins WG. Effects of high-fat and high-carbohydrate diets on metabolism and performance in cycling. *Metabolism*. 2002 Jun;51(6):678-90.

62.

Faigenbaum AD, Kraemer WJ, Blimkie CJR, Jeffreys I, Micheli LJ, Nitka M, et al. Youth Resistance Training: Updated Position Statement Paper From the National Strength and Conditioning Association. *Journal of Strength and Conditioning Research*. 2009 Aug;23:S60-79.

63.

Baechle TR, National Strength & Conditioning Association (U.S). *Essentials of strength training and conditioning*. Champaign, Ill: Human Kinetics; 1994.

64.

Kelly VG, Coutts AJ. Planning and Monitoring Training Loads During the Competition Phase in Team Sports. *Strength and Conditioning Journal*. 2007;29(4).

65.

Gamble P. Periodization of Training for Team Sports Athletes. *Strength and Conditioning Journal*. 2006;28(5).

66.

Maughan RJ, Depiesse F, Geyer H. The use of dietary supplements by athletes. *Journal of Sports Sciences*. 2007 Dec;25(sup1):S103-13.

67.

Connor J, Woolf J, Mazanov J. Would they dope? Revisiting the Goldman dilemma. *British Journal of Sports Medicine*. 2013 Jul;47(11):697-700.

68.

Volek JS, Rawson ES. Scientific basis and practical aspects of creatine supplementation for athletes. *Nutrition*. 2004 Jul;20(7-8):609-14.

69.

VOLEK JS, DUNCAN ND, MAZZETTI SA, STARON RS, PUTUKIAN M, G??MEZ AL, et al. Performance and muscle fiber adaptations to creatine supplementation and heavy resistance training. *Medicine & Science in Sports & Exercise*. 1999 Aug;31(8):1147-56.

70.

IZQUIERDO M, IBA??EZ J, GONZ??LEZ-BADILLO JJ, GOROSTIAGA EM. Effects of creatine supplementation on muscle power, endurance, and sprint performance. *Medicine and Science in Sports and Exercise*. 2002 Feb;34(2):332-43.

71.

Graham TE, Rush JWE, Soeren MH van. Caffeine and Exercise: Metabolism and Performance. *Canadian Journal of Applied Physiology*. 1994 Jun;19(2):111-38.

72.

Tarnopolsky MA. Caffeine and Creatine Use in Sport. *Annals of Nutrition and Metabolism*. 2010;57(s2):1-8.

73.

Bruce M, Scott N, Lader M, Marks V. The psychopharmacological and electrophysiological effects of single doses of caffeine in healthy human subjects. *British Journal of Clinical*

Pharmacology. 1986 Jul;22(1):81-7.

74.

Carr AJ, Hopkins WG, Gore CJ. Effects of Acute Alkalosis and Acidosis on Performance. Sports Medicine. 2011 Oct;41(10):801-14.

75.

Jones AM. DIETARY NITRATE: THE NEW MAGIC BULLET? 2013;26(110):1-5. Available from: https://secure.footprint.net/gatorade/stg/gssiweb/pdf/110_Jones_SSE.pdf

76.

Bailey SJ, Winyard P, Vanhatalo A, Blackwell JR, DiMenna FJ, Wilkerson DP, et al. Dietary nitrate supplementation reduces the O₂ cost of low-intensity exercise and enhances tolerance to high-intensity exercise in humans. Journal of Applied Physiology. 2009 Oct 1;107(4):1144-55.

77.

CLARK VR, HOPKINS WG, HAWLEY JA, BURKE LM. Placebo effect of carbohydrate feedings during a 40-km cycling time trial. Medicine & Science in Sports & Exercise. 2000 Sep;1642-7.

78.

Jeukendrup A. A Step Towards Personalized Sports Nutrition: Carbohydrate Intake During Exercise. Sports Medicine. 2014 May;44(S1):25-33.

79.

Burke LM, Kiens B, Ivy JL. Carbohydrates and fat for training and recovery. Journal of Sports Sciences. 2004 Jan;22(1):15-30.

80.

Phillips SM, Van Loon LJC. Dietary protein for athletes: From requirements to optimum

adaptation. *Journal of Sports Sciences*. 2011 Jan;29(sup1):S29–38.

81.

Goldstein ER, Ziegenfuss T, Kalman D, Kreider R, Campbell B, Wilborn C, et al. International society of sports nutrition position stand: caffeine and performance. *Journal of the International Society of Sports Nutrition*. 2010;7(1).

82.

Bean A. *The complete guide to sports nutrition*. 4th ed. London: A & C. Black; 2003.

83.

Burke L. *Practical sports nutrition*. Champaign, IL: Human Kinetics; 2007.

84.

Jeukendrup AE. *Sports nutrition: from lab to kitchen*. Maidenhead: Meyer & Meyer Sport; 2010.

85.

Maughan RJ, editor. *Nutrition in Sport* [Internet]. Oxford, UK: Blackwell Science Ltd; 2000. Available from:
<http://content.talisaspire.com/glasgow/bundles/58db7718e7ebb6854b8b4568>

86.

Crust L. A review and conceptual re-examination of mental toughness: Implications for future researchers. *Personality and Individual Differences*. 2008 Nov;45(7):576–83.

87.

MacNamara Á, Button A, Collins D. The Role of Psychological Characteristics in Facilitating the Pathway to Elite Performance Part 1: Identifying Mental Skills and Behaviors. *The Sport Psychologist*. 2010 Mar;24(1):52–73.

88.

Prevention, Diagnosis, and Treatment of the Overtraining Syndrome. *Medicine & Science in Sports & Exercise*. 2013 Jan;45(1):186-205.

89.

Mellalieu SD, Hanton S, Shearer DA. Hearts in the fire, heads in the fridge: A qualitative investigation into the temporal patterning of the precompetitive psychological response in elite performers. *Journal of Sports Sciences*. 2008 Jun;26(8):811-24.