

## REFERENCES

AARON, E.A. (1992). Oxygen cost of exercise hyperpnea: implications for performance. **Journal of Applied Physiology**, 75:1818-1825.

AHMAIDI, S. COLLOMP, K. PREFAUT, C. (1992). Maximal and functional aerobic capacity as assessed by two graduated field methods in comparison to laboratory exercise testing in moderately trained subjects. **International Journal of Sports Medicine**, 13(3):243-248.

ARNHEIM, D.D. PRENTICE, W.E. (1993). Principles of Athletic Training (8<sup>th</sup> edition). St Louis: Mosby Year Book.

ASHENDEN, M.J. GORE, C.J. MARTIN, D.T. DOBSON, G.P. HAHN, A.G. (1999). Effects of a 12-day "live high, train low" camp on reticulocyte production and haemoglobin mass in elite female road cyclists. **European Journal of Applied Physiology**, 80:472-478.

ASTRAND, P.O. RODHAL, K. (1986). **Textbook of Work Physiology**. New York: McGraw-Hill.

BAHR, R. INGES, I. SEJERSTED, O.M. (1987). Effect of duration of exercise on excess post exercise O<sub>2</sub> consumption. **Journal of Applied Physiology**, 62(2):485-90.

BAHR, R. SEJERSTED, O.M. (1991). Effect of intensity of exercise and post-exercise on excess post exercise O<sub>2</sub> consumption. **Metabolism**, 40:836-41.

BAILEY, S. PATE, R. (1991). Feasibility of improving running economy. **Sports Medicine**, 12:228-236.

BAKER, A. HOPKINS, W.G. (1998). Altitude training for sea-level competition. Sport Science training and Technology, http:sportsci.org/traintech/altitude/wgh.html



BANISTER, E.W. WOO, W. (1978). Effects of stimulated altitude training on aerobic and anaerobic power. European Journal of Applied Physiology, 38:55-69.

BARSTOW, T.J. JONES, A.M. NGUYEN, P.H. CASABURI, R. (1996). Influence of muscle fiber type and pedal frequency on oxygen uptake kinetics of heavy exercise. **Journal of Applied Physiology**, 81:1642-1650.

BASSETT, D.R. (1985). Aerobic requirements of overground versus treadmill running. Medicine and Science in Sports and Exercise, 17:477.

BERG, K. LATIN, R.W. COFFEY, C. (1998). Relationship of somatotype and physical characteristics to distance running performance in middle age runners. **Journal of Sports Medicine & Physical Fitness**, 38(3):253-257.

BERGH, U. EKBLOM, B. ASTRAND P.O. (2000). Maximal oxygen uptake "classical" versus "contemporary" viewpoints. **Medicine and Science in Sport and Exercise**, 32(1):85-88.

BERRè, J. VACHIERY, J.L. MORAINE, J.J. NAEIJE, R. (1999). Cerebral blood flow velocity responses to hypoxia in subjects who are susceptible to high-altitude pulmonary oedema. **European Journal of Applied Physiology**, 80:260-263.

BESTER, N. (1997). My Beating Heart. Comrades Marathon Update, 4:16-17.

BILLAT, L.V. RENOUX, J.C. PINOTEAU, J. PETIT, B. KORALSZTEIN, J.P. (1994). Reproducibility of running time to exhaustion at VO<sub>2</sub> max in subelite runners. **Medicine and Science in Sports and Exercise**, 26(2):254-257.

BILLAT, L.V. KORALSZTEIN, J.P. (1996). Significance of the velocity at  $v - VO_2$  max and time to exhaustion at this velocity. **Sports Medicine**, 22:90-108.



BOSCH, A.N. GOSLIN B.R. NOAKES, T.D. DENNIS, S.C. (1990). Physiological differences between black and white runners during a treadmill marathon. **European Journal of Applied Physiology**, 61:68-72.

BOUCHARD, C. DIONNE, F.T. SIMONEAU, J.A. BOULAY, M.R. (1992). Genetics of aerobic and anaerobic performances. **Exercise and Sport Sciences Reviews**, 20:27-58.

BRANDON, L.J. (1995). Physiological factors associated with middle distance running performance. **Sports Medicine**, 4:268-277.

BREHM, B.A. CUTIN, B. (1986). Recovery energy expenditure of steady state exercise in runners and nonexercisers. **Medicine and Science in Sport and Exercise**, 18:205-210.

BRINK, G. (1999). Personal communication. Pretoria.

BRISSWALTER, J. LEGROS, P. (1994). Daily stability in energy cost of running, respiratory parameters and stride rate among well-trained middle distance runners. **International Journal of Sports Medicine**, 15(5):238-241.

BRISSWALTER, J. LEGROS, P. DURANT, M. (1996). Running economy, preferred step length correlated to body dimensions in elite middle distance runners. **Journal of Sports Medicine and Physical Fitness**, 36:7-15.

BROOKS, G.A. (1985). Anaerobic threshold: review of the concept and directions for future research. **Medicine and Science in Sports and Exercise**, 17(1):22-31.

BUCK, D. McNAUGHTON, L. (1999). Maximal accumulated oxygen deficit must be calculated using 10 min time periods. **Medicine and Science in Sports and Exercise**, 31(9):1346-1349.



BUICK, F. GLEDHILL, N. FROESE, A. SPRIET, L. MEYERS, E.C. (1980). Effect of induced erytrocythemia on aerobic work capacity. **Journal of Applied Physiology**, 48:636-642.

BURKE, L. (1988). The Complete South African Guide to Sports Nutrition. Cape Town: Oxford University Press..

BURKE, J. THAYER, R. BELCAMINO, M. (1994). Comparison of effects of two interval-training programmes on lactate and ventilatory thresholds. **British Journal of Sports Medecine**, 28(1).

CHAD, K.E. WENGER, H.A. (1985). The effects of duration and intensity on the exercise and post exercise metabolic rate. **Australian Journal of Science and Medicine in Sport**, December: 14-18.

CHAD, K.E. QUIGLEY, B.M. (1991). Exercise intensity: Effect on post-exercise O<sub>2</sub> uptake in trained and untrained women. **Journal of Applied Physiology**, 70:1713-9.

CAVANAGH, P. KRAM, R. RODGERS, M. SANDERSON, D. HENNIG, E. (1985). An approach to biomechanical profiling of elite distance runners. **Journal of Sport Biomechanics**, 1:36-62.

CHENG, B. KUIPERS, H. SNYDER, A.C. KEIZER, H.A. JEUKENDRUP, A. HESSELINK, M. (1992). A new approach for the determination of ventilatory and lactate thresholds. **International Journal of Sports Medicine**, 13(7):518-522.

COAST, J.R. (1993). Ventilatory work and oxygen consumption during exercise and hyperventilation. **Journal of Applied Physiology**, 74:793.



COETZER, P. NOAKES, T.D. SANDERS, B. LAMBERT, M.I. BOSCH, A.N. WIGGINS, T. DENNIS, S.C. (1993). Superior fatigue resistance of elite black South African runners. **Journal of Applied Physiology**, 75(4):1822-1827.

CONLEY, D.L. KRAHENBUHL, G.S. (1980). Running economy and distance running performance of highly trained athletes. **Medicine and Science in Sports and Exercise**, 12:357.

COSTILL, D.L. (1967). The relationship between selected physiological variables and distance performance. **Journal of Sports Medicine**, 7:61-66.

COSTILL, D.L. FOX, E.L. (1969). Energetics of marathon running. **Medicine and Science** in Sports, 1:81-86.

COSTILL, D.L. (1970). Metabolic responses during distance running. **Journal of Applied Physiology**, 28:251-255.

COSTILL, D.L. (1972). Physiology of marathon running. **Journal of the American Medical Association**, 221:1024-1029.

COSTILL, D.L. THOMASON, H. ROBERTS, E. (1973). Fractional utilization of the aerobic capacity during distance running. **Medicine and Science in Sports and Exercise**, 5:248-252.

COSTILL, D.L. (1979). A Scientific approach to Distance Running. Los Altos, CA: 25-26.

Track and Field News.

COYLE, E.F. COGGAN, A.R. HOPPER, M.K. WALTERS, T.J. (1988). Determinants of endurance in well-trained cyclists. **Journal of Applied Physiology**, 64:2622-2630.

CURTIS, R. (1988). Qutdoor Action Program. Princeton University.



DANIELS, J.T. (1985). A physiologist's view of running economy. **Medicine and Science** in Sports and Exercise, 17:332-338.

DANIELS, J. DANIELS, N. (1991). Running economy of elite male and elite female runners. Medicine and Science in Sports and Exercise, 24:483-489.

DAVID, R. BASSETT, J.R. HOWLEY, E.T. (2000). Limiting factors for maximum oxygen uptake and determinants of endurance performance. **Medicine and Science in Sports and Exercise**, 32(1):70-84.

DAVIES, C.T.M. (1980). Metabolic cost of exercise and physical performance in children with some observations on external loading. **European Journal of Applied Physiology**, 45:95-102.

DAVIES, C.T.M. THOMPSON, M.W. (1986). Physiological responses to prolonged exercise in ultramarathon athletes. **Journal of Applied Physiology**, 61:611-617.

DAVIS, J.A. (1985). Anaerobic threshold: review of the concept and directions for future research. Medicine and Science in Sports and Exercise, 17:6-18.

DEMPSEY, J.A. HENDERSON, K. (1984). Exercise-induced arterial hypoxemia in healthy human subjects at sea level. **Journal of Physiology**, 355:161-175.

DEMPSEY, J.A. (1986). Is the lung build for exercise? Medicine and Science in Sports and Exercise, 18:143-155.

DICARLO, L.J. SPARLING, P.B. MILLARD-STAFFORD, M.L. RUPP, J.C. (1991). Peak heart rated during maximal running and swimming: implications for exercise prescription. **International Journal of Sports Medicine**, 12(3):309-312.



DOLEZAL, B.A. POTTEIGER, J.A. (1996). Resistance training for endurance runners during the off-season. **Strength and Conditioning**, June 7:10.

DOTAN, R. ROTSTEIN, A. GRODJINOVSKY, A. (1989). Effect of training on OBLA determination. **International Journal of Sports Medicine**, 10:346-351.

DOUGLAS, L.C. KRAHENBUHL, G.S. BURKETT, L.N. (1981). Training for aerobic capacity and running economy. **The Physician and Sports Medicine**, 9(4):107-115.

FALK, B. (1995). Blood lactate concentration following exercise. **International Journal of Sports Medicine**, 16:7.

FARREL, P.A. WILMORE, J.H. COYLE, E.F. BILLING, J.E. COSTILL, D.L. (1979) Plasma lactate accumulation and distance running performance. **Medicine and Science in Sport**, 11:338-344.

FITTS, R.H. (1994). Cellular mechanisms of muscle fatigue. **Physiological Reviews**, 47(1):49-70.

FOHRENBACH, R. MADER, A. HOLLMANN, W. (1987). Determination of endurance capacity and prediction do exercise intensities for training and competition in marathon runners. **International Journal of Sports Medicine**, 8:11-18.

FOSS, M.L. KETEYIAN, S.J. (1998). Fox's Physiological Basis for Exercise and Sport. (6<sup>th</sup> edition). USA: WCB/McGraw-Hill.

FOX, E. BOWERS, R. FOSS, M. (1993).. The Physiological Basis for Exercise and Sport (5<sup>th</sup> edition). Dubuque, Iowa: WCB Brown & Benchmark Publishers.



FOXDAL, P. SJODIN, A. SJODIN, B. (1996). Comparison of blood lactate concentrations obtained during incremental and constant intensity exercise. **International Journal of Sports Medicine**, 17:361-365.

FRANKLIN, B.A. (1989). Aerobic exercise training programs for the upper body. **Medicine** and Science in Sports and Exercise, 21:S141.

FRICK, M. SJOGREN, A. PERSASALO, J. PAJUNEN, S. (1970). Cardiovascular dimensions and moderate physical training in young men. **Journal of Applied Physiology**, 29:452-455.

FROELICHER, V.F. BRAMMELL, H. DAVIS, G. NOGUERS, A. (1974). A comparison of three maximal treadmill exercise protocols. **Journal of Applied Physiology**, 36:720-725.

GILMAN, M.B. WELLS, C.L. (1993). The use of heart rates to monitor exercise intensity in relation to metabolic variables. **International Journal of Sports Medicine**, 14(6):339-344.

GORE, C.J. WITHERS, R.T. (1990). The effect of exercise intensity and duration on the oxygen deficit and excess post-exercise oxygen consumption. **European Journal of Applied Physiology**, 60:169-174.

GREEN, H.J. SUTTON, J.R. CYMERMAN, A. YOUNG, P.M. HOUSTON, C. (1989). Operation Everest II: adaptations in human skeletal muscle. **Journal of Applied Physiology**, 66:2454-2461.

GROVES, B.M. (1987). Operation Everest: elevated high-altitude pulmonary resistance unresponsive to oxygen. **Journal of Applied Physiology**, 63:521.

GUPTA, S. GOSWAMI, A. SADHUKHAN, A.K. MATHUR, D.N. (1996). Comparative study of lactate removal in short term massage of extremities, active recovery and passive



recovery period after supramaximal exercise sessions. International Journal of Sports Medicine, 17:107-110.

HAFFOR, A.A. HARRISON, A.C. KIRK, P.A. (1991). Anaerobic threshold alterations caused by interval training in 11-year-olds. **Journal of Sports Medicine and Physical Fitness**, 30:53-53.

HAGBERG, J.M. (1980). Faster adjustment to and recovery from submaximal exercise in the trained state. **Journal of Applied Physiology**, 48:218.

HAGBERG, J.M. (1980). Effect of work intensity and duration on recovery O<sub>2</sub>. **Journal of Applied Physiology**, 48:540-544.

HAGBERG, J.M. (1984). Physiological implications of the lactate threshold. **International Journal of Sports Medicine**, 5:106-109.

HAUSSWIRTH, C. BIGARD, A.X. BERTHELOT, M. THOMAIDIS, M. GUEZENNEC, C.Y. (1996). Variability in energy cost of running at the end of a triathlon and a marathon. **International Journal of Sports Medicine**, 17:8, 572-579.

HAWLEY, J.A. NOAKES, T.D. (1992). Peak power output predicts maximal oxygen uptake and performance time in trained cyclists. **European Journal of Applied Physiology**, 65:79-83.

HAWLEY, J.A. (1995). State of the art training guidelines for endurance performance. **Sports Medicine**, 7-11.

HAWLEY, J.A. (1997). Altitude or Attitude? Runner's World, September:14.

HAWLEY, J.A. (1998). Resistance and endurance. Runner's World, April: 14.



HECK, H. MADER, A. HESS, G. MUCKE, S. MULLER, R. HOLLMANN, W. (1985). Justification of the 4 mmol/L lactate threshold. **International Journal of Sports Medicine**, 6:117-130.

HELGERUD, J. INGJER, F. STROMME, S.B. (1990). Sex differences in performance-matched marathon runners. European Journal of Applied Physiology, 61:433-439.

HETZLER, R.K. SEIP, R.L. BOUTCHER, S.H. PIERCE, E. SNEAD, D. WELTMAN, A. (1991). Effect of exercise modality on ratings of perceived exertion at various lactate concentrations. **Medicine and Science in Sports and Exercise**, 23:88-92.

HICKSON, R.C. ROSENKOETTER, M.A. (1981). Reduced training frequencies and maintenance of increased aerobic power. **Medicine and Science in Sports and Exercise**, 13:13-16.

HICKSON, R.C. (1981). Skeletal muscle cytochrome and myoglobin endurance, and frequency of training. **Journal of Applied Physiology**, 51(3):746-749.

HILL, D.W. ROWELL, A.L. (1996). Significance of time to exhaustion during exercise at the velocity associated with VO<sub>2</sub> max. **European Journal of Applied Physiology**, 72:383-386.

HIROKOBA, K. MARUYAMA, A. INAKI, M. MISAKA, K (1992). Effect of endurance training on excessive CO<sub>2</sub> expiration due to lactate production in exercise. **European Journal of Applied Physiology**, 64:73-77.

HOFFMANN, J.J. LOY, S.F. SHAPIRO, B.I. HOLLAND, G.J. VINCENT, W.J. SHAW, S. THOMPSON, C.L. (1993). Specificity effects of run versus cycle training on ventilatory threshold. **European Journal of Applied Physiology**, 67:43-47.



HOLTZHAUSEN, L. NOAKES, T.D. KRONING, B. DE KLERK, M. ROBERTS, M. EMSLEY, R. (1994). Clinical and biochemical characteristics of collapsed ultramarathon runners. **Medicine and Science in Sports and Exercise**, 1095-1099.

HOUMARD, J.A. COSTILL, D.L. MITCHELL, J.B. PARK, S.H. HICKNER. R.C. ROEMMICH, J.N. (1990). Reduced training maintains performance in distance runners. **International Journal of Sports Medicine**, 11:46-52.

HOUMARD, J.A. SCOTT, B.K. JUSTICE, C.L. CHENIER, T.C. (1994). The effects of taper on performance in distance runners. **Medicine and Science in Sports and Exercise**, 26(5):624-631.

HOUSH, T.J. THORLAND, W.G. POHNSON, G.O. HUGHES, R.A. CISAR, C.J. (1988). The contribution of selected physiological variables to middle distance running performance. **Journal of Sports Medicine and Physical Fitness**, 28:20-26.

HOWLEY, E.T. BASSETT, D.R. WELCH, H.G. (1995). Criteria for maximal oxygen uptake; review and commentary. **Medicine and Science in Sports and Exercise**, 27:1292-1301.

JACOBS, I. (1987). Blood lactate: implications for training and sports performance. **Sports Medicine**, 3:10.

JAMES, N.W. ADAMS, G.M. WILSON, A.F. (1989). Determination of anaerobic threshold by ventilatory frequency. **International Journal of Sports Medicine**, 10:192-196.

JANSSEN, P.G.J.M. (1987). Training lactate pulse rate. Finland: Polar Electro Oy.

JENKINS, D.G. QUIGLEY, B.M. (1992). Endurance training enhances critical power. **Medicine and Science in Sports and Exercise**, 24(11): 1283-1289.



JOHNSTON, R.E. QUINN, T.J. KERTZER, R. (1995). Improving running economy through strength training. **NSCA Journal**, 17(4):7-12.

JONES, A.M. CARTER, H. DOUST, J.H. (1999). A disproportionate increase in VO<sub>2</sub> coincident with lactate threshold during treadmill exercise. **Medicine and Science in Sports** and Exercise, 31(9):1299-1306.

JONES, A.M. McCONNELL, A.M. (1999). Effect of exercise modality on ocygen uptake kinetics during heavy exercise. **European Journal of Applied Physiology**, 80:213-219.

JOOSTE, P.L. VAN DER LINDE, A. STRYDOM, N.B. (1981). Prediction of Comrades Marathon performance. South African Journal for Research in Sport, Physical Education and Recreation, 4(1):47-54.

KAMINSKY, L.A. PADJEN, S. LAHAM-SEAGER, J. (1990). Effect of split exercise on excess postexercise oxygen consumption. **British Journal of Sports Medicine**, 24(2):95-98.

KARLSSON, J. JACOBS, I. (1982). Onset of blood lactate accumulation during muscular exercise as a threshold concept. **International Journal of Sports Medicine**, 3:190.

KAYSER, B. FERRETTI, G. GRASSI, B. BINZONI, T. (1993). Maximal lactic capacity at altitude: effect of bicarbonate loading. **Journal of Applied Physiology**, 75(3):1070-1074.

KEARNEY, J.T. VAN HANDEL, P.J. (1989). Running Economy: A physiologic perspective. Advances in Sports Medicine and Fitness, 2:57-89.

KEITH, S.P. JACOBS, E. McLELLAN, T.M. (1992). Adaptations to training at the individual anaerobic threshold. **European Journal of Applied Physiology**, 65:316-323.



KINDERMANN, W. SIMON, G. KEUL, J. (1979). The significance of the aerobic-anaerobic transition for the determination of work load intensities during endurance training. **European Journal of Applied Physiology**, 42:25-34.

KOCHAN, R.G. LAMB, D.R. LUTZ, S.A. RERRELL, C.V. (1979). Glycogen synthetase activation in human skeletal muscle: effect of diet and exercise. **American Journal of Physiology**, 235:660-666.

KRAHENBUHL, G.S. MORGAN, D.W. PANGRAZI, R.P. (1989). Longitudinal changes in distance-running performance of young males. **International Journal of Sports Medicine**, 10(2):92-96.

KRAHENBUHL, G.S. WILLIAMS, T.J. (1991). Running economy: changes with age during childhood and adolescence. **Medicine and Science in Sports and Exercise**, 24(4):462-466.

KUIPERS, H. KEIZER, H.A. (1988). Overtraining in elite athletes. Review and directions for the future. **Sports Medicine**, 6:79-92.

KUIPERS, H. ARTS, F.J.P. (1994). The relation between power output, oxygen uptake and heart rate in male athletes. **International Journal of Sports Medicine**, 15(2):228-231.

LACOUR, J.R. BOUVAT, E. BARTHLEMEY, J.C. (1990). Post-competition blood lactate concentrations as indicators of anaerobic energy expenditure. **European Journal of Applied Physiology**, 6:172-176.

LAITINEN, H. ALOPAEUS, K. HEIKKINEN, R. HEITANEN, H, MIKKELSSON, L. (1995). Acclimatisation to living in normobaric hypoxia and training in normoxia at sea level in runners. **Medicine and Science in Sports and Exercise**, 27:S109.



LEHMANN, M. BAUMGARTL, P. WIESENACK, C. SIEDEL, A. BAUMANN, H. FISCHER, S. (1992). Training – overtraining: Influence of a defined increase in training volume vs training intensity on performance, catecholamines and some metabolic parameters in experienced middle and long distance runners. **European Journal of Applied Physiology**, 64:169-177.

LENZI, G. (1987). The marathon race: Modern training methodology. **New Studies in Athletics**, 2:41-50

LEVINE, B.D. STAY-GUNDERSEN, J. (1992). A practical approach to altitude training: where to live and train for optimal performance enhancement. **International Journal of Sports Medicine**, 13(11):209-212.

LOHMAN, T.G. ROCHE, A.F. MARTORELL, R. (1988). Anthropometric Standardisation Reference Manual. Champaign, Illinois: Human Kinetics. 87-91.

LONDEREE, B.L. (1986). The use of laboratory test results with long distance runners. **Sports Medicine**, 3:201-213.

LONDEREE, B.R. (1995). % VO<sub>2</sub> max regressions for six modes of exercise. Medicine and Science in Sports and Exercise, 458.

LOUANNE, F. LONDEREE, B.R. LAFONTAINE, T.P. and VOLEK, M.R. (1989). Physiological parameters related to distance running performance in female athletes. **Medicine and Science in Sports and Exercise**, 21:319-324.

MacDOUGALL, J.D. WENGER, H.A. GREEN, H.J. (1991). Physiological Testing of the High-Performance Athlete, (2<sup>nd</sup> edition). UK, England: Human Kinetics.



MAFFULLI, N. TESTA, V. LANCIA, A. (1991). Indices of sustained aerobic power in young middle distance runners. **Medicine and Science in Sports and Exercise**, 23(9): 1090-1096.

MAFFULLI, N. TESTA, V. CAPASSO, G. (1994). Anaerobic threshold determination in master endurance runners. **Journal of Sports Medicine and Physical Fitness**, 34:242-9.

MAKRIDES, L. HEIGENHAUSER, G.J. McCARTNEY, N. (1985). Maximal short term exercise capacity in healthy subjects aged 15-70 years. Clinical Science, 69(2):197-205.

MARESH, C.M. ABRAHAM, A. DE SOUZA, M.J. DESCHENES, M.R. KRAEMER, W. ARMSTRONG, L.E. MAGUIRE, M.S. GABAREE, C.L. HOFFMAN, J.R. (1992). Oxygen consumption following exercise of moderate intensity and duration. **European Journal of Applied Physiology**, 65:421-426.

MARIEB, E.N. (1989). **Human Anatomy and Physiology**. Redwood City, California: Benjamin/Cummings.

MARTIN, D.E. COE, P.E. (1997). Better Training for Distance Runners, (2<sup>nd</sup> edition). USA: Human Kinetics.

MARTIN, P. FERNHALL, B. KRAHENBUL, G. (1987). The effect of workout intensity on running economy and mechanics. **Hong Kong Sports Medicine Conference**, Abstract.

MARTIN, P.E. MORGAN, D.W. (1992). Biomechanical considerations for economical walking and running. **Medicine and Science in Sports and Exercise**, 24:467.

McARDLE, W.D. KATCH, F.I. KATCH, V.L. (1996). Exercise Physiology: Energy, Nutrition and Human Performance. (4<sup>th</sup> edition). Pennsylvania USA: Williams & Wilkins.



McARTHER, P.S. NOAKES, T.D. GEVERS, W. MILLAR, R. (1983). Studies of the metabolic basis of fatigue during marathon and ultra-marathon races. South African Journal for Research in Sport, Physical Education and Recreation, 6(1):49-57.

McCONNEL, T.R. (1988). Practical considerations in the testing of VO<sub>2</sub> max in runners. **Sports Medicine**, 5:57-68.

McCONNEL, G.K. COSTILL, D.L. WIDRICK, J.J. HICHEY, M.S. TANAKA, H. GASTIN, P.B. (1993). Reduced training volume and intensity maintain aerobic capacity but not performance in distance runners. **International Journal of Sports Medicine**, 14(1):33-37.

McGEE, B. (1998). Be strong, run long. Runner's World, January: 22.

McLELLAN, T.M. JACOBS, I. (1989). Active recovery, endurance training, and the calculation of the individual anaerobic threshold. **Medicine and Science in Sports and Exercise**, 21:586-592.

McLELLAN, T.M. CHEUNG, S.Y. (1992). A comparative evaluation of the individual anaerobic threshold and the critical power. **Medicine and Science in Sports and Exercise**, 24(5): 543-550.

McNAUGHTON, L. BACKX, G.P. PALMER, G. STRANGE, N. (1999). Effects of chronic bicarbonate ingestion on the performance of high-intensity work. **European Journal of Applied Physiology**, 80:333-336.

MEYER, T. GABRIEL, H.H.W. KINDERMANN, W. (1999). Is determination of exercise intensities as percentages of VO<sub>2</sub> max or HR max adequate? **Medicine and Science in Sports and Exercise**, 31(9):1342-1345.



MOCELLIN, R. HEUSGEN, M. GILDEIN, H.P. (1990). Anaerobic threshold and maximal steady-state blood lactate in prepubertal boys. **European Journal of Applied Physiology**, 62:56-60.

MOGNONI, P. SIRTORI, M.D. LORENZELLI, F. CERRETELLI, P. (1990). Physiological responses during prolonged exercise at the power output corresponding to the blood lactate threshold. **European Journal of Applied Physiology**, 60:239-243.

MORGAN, D.W. (1989). Running economy. Nike Sports Research Review.

MORGAN, D.W. BALDINI, F.D. MARTIN, P.E. KOHRT, W.M. (1989). Ten kilometer performance and predicted velocity at VO<sub>2</sub> max among well-trained male runners. **Medicine** and Science in Sports and Exercise, 21(1):78-83.

MORGAN, D.W. MARTIN, P.E. KRAHENBUHL, G.S. BALDINI, F.D. (1990). Variability in running economy and mechanics among trained male runners, **Medicine and Science in Sports and Exercise**, 23(3):378-383.

MORGAN, D.W. DANIELS, J. CARLSON, P. FILARSKI, K. LANDLE, K. (1991). Use of recovery VO<sub>2</sub> to predict running economy. **European Journal of Applied Physiology**, 62:420-423.

MORGAN, D.W. CRAIB, M. (1992). Physiological aspects of running economy. Medicine and Science in Sports and Exercise, 24:456.

MORGAN, D.W. BRANSFORD, D.R. COSTILL, D.L. DANIELS, J.T. HOWLEY E.T. KRAHENBUHL, G.S. (1995). Variation in the aerobic demand of running among trained and untrained subjects. **Medicine and Science in Sports and Exercise**, 27(3):404-409.



MUTTON, D.L. LOY, S.F. ROGERS, D.M. HOLLAND, G.J. VINCENT, W.J. HENG, M. (1993). Effect of run vs combined cycle/run training on VO<sub>2</sub> max and running performance. **Medicine and Science in Sports and Exercise**, 25(12):1393-1397.

NEVILL, A.M. COOKE, C.B. HOLDER, R.L. RAMSBOTTOM, R. WILLIAMS, C. (1992). Modelling bivariate relationships when repeated measurements are recorded on more than one subject. **European Journal of Applied Physiology**, 64:419-425.

NOAKES, T.D. (1988). Implications of exercise testing for prediction of athletic performance. Medicine and Science in Sports and Exercise, 20:319-330.

NOAKES, T.D, MYBURGH, K.H, SCHALL, R. (1990). Peak treadmill running velocity during the VO<sub>2</sub> max test predicts running performance. **Journal of Sports Sciences**, 8:35-45.

NOAKES, T.D. (1992). **The Lore of Running.** (3<sup>rd</sup> edition). Cape Town: Oxford University Press.

NOAKES, T.D. GRANGER, S. (1995). Running Your Best. South Africa.: Oxford University Press

NOAKES, T.D. (1998). Maximal oxygen uptake: "classical versus contemporary" viewpoints: a rebuttal. **Medicine and Science in Sport and Exercise**, 30:1381-1398.

OROK, C.J. HUGHSON, R.L. GREEN, H.J. THOMSON, J.A. (1989). Blood lactate responses in incremental exercise as predictors of constant load performance. **European Journal of Applied Physiology**, 59:262-267.

PALMER, A.S. POTTEIGER, J.A. NAU, K.L. TONG, R.J. (1999). A 1-day maximal lactate steady-state assessment protocol for trained runners. **Medicine and Science in Sports and Exercise**, 31(9):1336-1341.



PATE, R.R. BLAIR, S.N. DURSTINE, J.L. EDDY, D.O. HANSON, P. PAINTER, P. SMITH, L.K. WOLFF, L.A. (1991). Guidelines for Exercise Testing and Prescription (4<sup>th</sup> edition). Edited by American College of Sports Medicine, Philadelphia: Lea and Febiger.

PEREIRA, M.A. FREEDSON, P.S. MALISZEWSKI, A.F. (1991). Intraindividual variation during inclined steady-rate treadmill running. **Research Quarterly for Exercise and Sport**, 65(2):184-188.

PIZZA, F.X. FLYNN, M.G. STARLING, R.D. BROLINSON, P.G. SIGG, J. DUBITZ, E.R. DAVENPORT, R.L. (1994). Run training vs cross training: Influence of increases training on running economy, foot impact shock and run performance. **International Journal of Sports Medicine**, 16(3):180-184.

POWERS, S.K. DODD, S. DEASON, R. BIRD, R. McKNIGHT, T. (1983). Ventilatory threshold, running economy and distance running performance of trained athletes. **Research Ouarterly for Exercise and Sport,** 54: 179-182.

POWERS, S.K. LAWLER, J. DEMPSEY, J.A. DODD, S. LANDRY, G. (1989). Effects of incomplete pulmonary gas exchange of VO<sub>2</sub> max. **Journal of Applied Physiology**, 66:2491-2495.

PYNE, D. (1994). Is there a gender difference in running economy? **Sport Health,** 11 (2):45-46.

RAMSBOTTOM, R. WILLIAMS, C. BOOBIS, L. FREEMAN, W. (1989). Aerobic fitness and running performance of male and female recreational runners. **Journal of Sports Sciences**, 7:9-20.

RAMSBOTTOM, R. WILLIAMS, C. FLEMING, N. NUTE, M.L.G. (1989). Training induced physiological and metabolic changes associated with improvements in running performance. **British Journal of Sports Medicine**, 23(3):171-176.



RICE, C.L. PETTIGREW, F.P. NOBLE, E.G. TAYLOR, A.W. (1988). The fiber composition of skeletal muscle. **Medicine and Sport Science**, 27:22-39.

RIEU, M. FERRY, M. MARTIN, M.C. DIVALLET, A. (1990). Effect of previous supramaximal work on lacticaemia during supra-anaerobic threshold exercise. **European Journal of Applied Physiology**, 61:223-229.

ROBINSON, D.M. ROBINSON, S.M. HUME, P.A. HOPKINS, W.G. (1991). Training intensity of elite male distance runners. **Medicine and Science in Sports and Exercise**, 23(9):1078-1082.

ROSKAMM, H. LANDRY, F. SAMEK, M. SCHLAGER, H. (1969). Effects of a standardized ergometer training program at three different altitudes. **Journal of Applied Physiology**, 27(6):840-847.

ROWLAND, T.W. AUCHINACHIE, J.A. KEENAN, T.J. GREEN, G.M. (1987). Physiologic responses to treadmill running in adult and prepubertal males. **International Journal of Sports Medicine**, 8(4):292-297.

RUSKO, H.R. (1996). New aspects of altitude training. American Journal of Sports Medicine, 24(6):S48-S52.

SALTIN, B. KIM, C.K. TERRADOS, N. (1995). Morphology, enzyme activities and buffer capacity in leg muscles of Kenyan and Scandinavian runners. **Scandinavian Journal of Medicine**, Science and Sports, 5:222-230.

SCHNEIDER, D.A. POLLACK, J. (1991). Ventilatory threshold and maximal oxygen uptake during cycling and running in female triathletes. **International Journal of Sports Medicine**, 12:379-383.



SCRIMGEOUR, A.G. NOAKES, T.D. ADAMS. B. MYBRUGH, K. (1986). The influence of weekly training distance on fractional utilization of maximum aerobic capacity in marathon and ultramarathon runners. **European Journal of Applied Physiology**, 55:202-209.

SEDLOCK, D.A. FISSINGER, J.A. MELBY, C.L. (1989). Effect of exercise intensity and duration on postexercise energy expenditure. **Medicine and Science in Sports and Exercise**, 21(6):662-6.

SEILER, S. (1997). Hard facts on high intensity, high heat, and high altitude from the Mile-High city. **ACMS**, July-August, 1-6.

SEIP, R.L. (1991). Perceptual responses and blood lactate concentration: effect of training state. **Medicine and Science in Sports and Exercise**, 23:80.

SHEPLEY, B.J.D. MACDOUGALL, N. CIRPIANO, J.R. SUTTON, M. (1992). Physiological effects of tapering in highly trained athletes. **Journal of Applied Physiology**, 72:706-711.

SJODIN, B. JACOBS, I. SVEDENHAG, J. (1982). Changes in onset of blood lactate accumulation and muscle enzymes after training at OBLA. European Journal of Applied Physiology, 49:45-57.

SNYDER, A.C. WOULFE, T. WELSH, R. FOSTER, C. (1994). A simplified approach to estimating the maximal lactate steady state. **International Journal of Sports Medicine**, 15(1):27-31.

SPURWAY, N.C. (1992). Aerobic exercise, anaerobic exercise and the lactate threshold. **British Medical Bulletin**, 48(3):569-591.



STAY-GUNDERSEN, J. ALEXANDER, C. HOCHSTEIN, A. DELEMOS, D. LEVINE, B.D. (1992). Failure of red cell volume to increase to altitude exposure in iron deficient runners. **Medicine and Science in Sports Exercise**, 24:125-130.

STEGMAN, H. KINDERMANN, W. SCHNABEL, A. (1981). Lactate kinetics and individual anaerobic threshold. **International Journal of Sports Medicine**, 2:160-165.

STEGMAN, H. KINDERMAN, W. (1982). Comparison of prolonged exercise tests at the individual anaerobic threshold and the fixed anaerobic threshold of 4 mmol/L lactate. **International Journal of Sports Medicine**, 3:105-110.

TESCH, P.A. (1985). Exercise performance and beta-blockade. Sports Medicine, 2:389-412.

TOOLE, M.L. DOUGLAS, P.S. HILLER, W.D.B. (1998). Use of heart rate monitors by endurance athletes lessons from triathletes. **Journal of Sports Medicine and Physical Fitness**, 38:181-187.

URHAUSEN, A. COEN, B. KINDERMANN, W. (1993). Individual anaerobic threshold and maximum lactate steady state. **International Journal of Sports Medicine**, 14:134-139.

VAGO, P. RAMONATXO, M. PREFAUT, C. (1987). Is ventilatory anaerobic threshold a good index of endurance capacity. **International Journal of Sports Medicine**, 8:190-195.

WAGNER, P.D. (2000). New ideas on limitations to VO<sub>2</sub> max. Exercise and Sport Sciences Reviews, 28(1):10-14.

WALKER, J.A. WHITE, M.S. WELLS, C.L. (1993). Effects of cross training on running economy and 10 kilometer performance. **Sports Medicine**, 4:21-26.



WALSH, S.D. DAVIS, J.A. (1990). Non-invasive lactate threshold detection using V-slope method with non-breath-by-breath data. **International Journal of Sports Medicine**, 4:322.

WASHBURN, R.A. SEALS, D.R. (1984). Peak oxygen uptake during arm cranking in men and women. **Journal of Applied Physiology**, 56: 954.

WASSERMAN, K. BEAVER, WL. WHIPP, B.J. (1986). Mechanisms and patterns of blood lactate increase during exercise in man. **Medicine and Science in Sports and Exercise**, 18(3):344-352.

WEIGHT, L. MCGEE, B. (1998). Is a heart-rate monitor a necessary training tool? **Runners World,** January: 37-39.

WEIGHT, L. (1998). Ultra Women: The longer the better? Runners World, April: 50.

WELTMAN, A. (1990). Reliability and validity of a continuous incremental treadmill protocol for the determination of lactate threshold, fixed blook lactate concentrations and VO<sub>2</sub> max. **International Journal of Sports Medicine**, 11:26.

WELTMAN, A. SEEIP, R.L. SNEAD, D. WELTMAN, J.Y. HASKVITZ, E.M. EVANS, W.S. VELDHUIS, J.D. ROGOL, A.D. (1992). Exercise training at and above the lactate threshold in previously untrained women. **International Journal of Sports Medicine**, 13:257-263.

WELTMAN, A. SNEAD, D. SEIP, R. SCHURRER, R. WELTMAN, J. RUTT, R. ROGOL, A. (1992). Percentages of maximal heart rate, heart rate reserve and VO<sub>2</sub> max for determining endurance training intensity in male runners. **International Journal of Sports Medicine**, 11(3):218-222.



WEYAND, P.G. CURETON, K.J. CONLEY, D.S. SLONIGER. M.A. (1994). Peak oxygen deficit predicts sprint and middle-distance track performance. **Medicine and Science in Sports and Exercise**, 1174-1180.

WILLIAMS, T.J. KRAHENBUHL, G.S. MORGAN, D.W. (1991). Daily variation in running economy of moderately trained male runners. Medicine and Science in Sports and Exercise, 23:944-948.

WITHNEY, WOR. MILLEDGE, J.S. WILLIAMS, E.S. MINTY, B.D. BRYSON, E.I. (1983). Fluid and electrolyte homeostasis during prolonged exercise at altitude. **Journal of Applied Physiology**, 55:409-412.

YAMAJI, K. YOKOTA, Y. SHEPHARD, R.J. (1992). A comparison of the perceived and the ECG measured heart rate during cycle ergometer, treadmill and stairmill exercise before and after perceived heart rate training. **Journal of Sports Medicine and Physical Fitness**, 32(3):271-281.

YOSHIDA, T. UDO, M. CHIDA, M. ICHIOKA, M. MAKIGUCHI, K. YAMAGUCHI, T. (1990). Specificity of physiological adaptation to endurance training in distance runners and competitive walkers. **European Journal of Applied Physiology**, 61:197-201.

YOSHIDA, T. UDO, M. OHMORI, T. MATSUMOTO, Y. URAMOTO T. YAMAMOTO, K. (1992). Day-to day changes in oxygen uptake kinetics at the onset of exercise during strenuous endurance training. **European Journal of Applied Physiology**, 64:78-83.

ZAVORSKY, G.S. MONTGOMERY, D.L. PEARSALL, D.J. (1998). Effect of intense interval workouts on running economy using three recovery durations. **European Journal of Applied Physiology**, 77:224-230.



ZHANG, Y. JOHNSON, M.C. CHOW, N. WASSERMAN, K. (1991). Effect of exercise testing protocol on parameters of aerobic function. **Medicine and Science in Sports and Exercise**, 23(5): 625-630.