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BAAR, KEITH. 2006. 'Training for Endurance and Strength'. Medicine & Science in Sports & Exercise 38 (11): 1939–44. https://doi.org/10.1249/01.mss.0000233799.62153.19.

Baar, Keith, and D Grahame Hardie. 2008. 'Small Molecules Can Have Big Effects on Endurance'. Nature Chemical Biology 4 (10): 583–84. https://doi.org/10.1038/nchembio1008-583.

Barrès, Romain, Jie Yan, Brendan Egan, Jonas Thue Treebak, Morten Rasmussen, Tomas Fritz, Kenneth Caidahl, Anna Krook, Donal J. O'Gorman, and Juleen R. Zierath. 2012. 'Acute Exercise Remodels Promoter Methylation in Human Skeletal Muscle'. Cell Metabolism 15 (3): 405–11. https://doi.org/10.1016/j.cmet.2012.01.001.

Bogdanis, G C, M E Nevill, L H Boobis, H K Lakomy, and A M Nevill. 1995. 'Recovery of Power Output and Muscle Metabolites Following 30 s of Maximal Sprint Cycling in Man.' The Journal of Physiology 482 (2): 467–80. https://doi.org/10.1113/jphysiol.1995.sp020533.

Boluyt, Marvin O., Julie L. Brevick, David S. Rogers, Michael J. Randall, Antony F. Scalia, and Zhao Bo Li. 2006. 'Changes in the Rat Heart Proteome Induced by Exercise Training: Increased Abundance of Heat Shock Protein Hsp20'. PROTEOMICS 6 (10): 3154–69. https://doi.org/10.1002/pmic.200401356.

BOOTH, F. W., B. S TSENG, M. FLUCK, and J. A. CARSON. 1998. 'Molecular and Cellular Adaptation of Muscle in Response to Physical Training'. Acta Physiologica Scandinavica 162 (3): 343–50. https://doi.org/10.1046/j.1365-201X.1998.0326e.x.

Burniston, Jatin G. 2008. 'Changes in the Rat Skeletal Muscle Proteome Induced by Moderate-Intensity Endurance Exercise'. Biochimica et Biophysica Acta (BBA) - Proteins and Proteomics 1784 (7–8): 1077–86. https://doi.org/10.1016/j.bbapap.2008.04.007.

———. 2009. 'Adaptation of the Rat Cardiac Proteome in Response to Intensity-Controlled Endurance Exercise'. PROTEOMICS 9 (1): 106–15. https://doi.org/10.1002/pmic.200800268.

Burstein, Brett, and Stanley Nattel. 2008. 'Atrial Fibrosis: Mechanisms and Clinical Relevance in Atrial Fibrillation'. Journal of the American College of Cardiology 51 (8): 802–9. https://doi.org/10.1016/j.jacc.2007.09.064.

Bye, Anja, Morten A. Høydal, Daniele Catalucci, Mette Langaas, Ole Johan Kemi, Vidar Beisvag, Lauren G. Koch, Steven L. Britton, Øyvind Ellingsen, and Ulrik Wisløff. 2008. 'Gene Expression Profiling of Skeletal Muscle in Exercise-Trained and Sedentary Rats with Inborn

High and Low VO'. Physiological Genomics 35 (3): 213–21. https://doi.org/10.1152/physiolgenomics.90282.2008.

Bye, Anja, Mette Langaas, Morten A. Høydal, Ole Johan Kemi, Garrett Heinrich, Lauren G. Koch, Steven L. Britton, Sonia M. Najjar, Øyvind Ellingsen, and Ulrik Wisløff. 2008. 'Aerobic Capacity-Dependent Differences in Cardiac Gene Expression'. Physiological Genomics 33 (1): 100–109. https://doi.org/10.1152/physiolgenomics.00269.2007.

Carè, Alessandra, Daniele Catalucci, Federica Felicetti, Désirée Bonci, Antonio Addario, Paolo Gallo, Marie-Louise Bang, et al. 2007. 'MicroRNA-133 Controls Cardiac Hypertrophy'. Nature Medicine 13 (5): 613–18. https://doi.org/10.1038/nm1582.

Casey, A., D. Constantin-Teodosiu, S. Howell, E. Hultman, and P. L. Greenhaff. 1996. 'Creatine Ingestion Favorably Affects Performance and Muscle Metabolism during Maximal Exercise in Humans'. American Journal of Physiology-Endocrinology and Metabolism 271 (1): E31–37. https://doi.org/10.1152/ajpendo.1996.271.1.E31.

Chien, Kenneth R. 2007. 'Molecular Medicine: MicroRNAs and the Tell-Tale Heart'. Nature 447 (7143): 389–90. https://doi.org/10.1038/447389a.

Creemers, Esther E. J. M., Jeniffer N. Davis, Andrea M. Parkhurst, Peter Leenders, Kathryn B. Dowdy, Elizabeth Hapke, Anne M. Hauet, et al. 2003. 'Deficiency of TIMP-1 Exacerbates LV Remodeling after Myocardial Infarction in Mice'. American Journal of Physiology-Heart and Circulatory Physiology 284 (1): H364–71. https://doi.org/10.1152/ajpheart.00511.2002.

Daniels, A., M. van Bilsen, R. Goldschmeding, G. J. van der Vusse, and F. A. van Nieuwenhoven. 2009. 'Connective Tissue Growth Factor and Cardiac Fibrosis'. Acta Physiologica 195 (3): 321–38. https://doi.org/10.1111/j.1748-1716.2008.01936.x.

Di Biase, Valentina, and Clara Franzini-Armstrong. 2005. 'Evolution of Skeletal Type e–c Coupling'. The Journal of Cell Biology 171 (4): 695–704. https://doi.org/10.1083/jcb.200503077.

Diffee, Gary M. 2004. 'Adaptation of Cardiac Myocyte Contractile Properties to Exercise Training'. Exercise and Sport Sciences Reviews 32 (3): 112–19. https://doi.org/10.1097/00003677-200407000-00007.

Eto, Yoko, Katsunori Yonekura, Makoto Sonoda, Naoto Arai, Masataka Sata, Seiryo Sugiura, Katsu Takenaka, et al. 2000. 'Calcineurin Is Activated in Rat Hearts With Physiological Left Ventricular Hypertrophy Induced by Voluntary Exercise Training'. Circulation 101 (18): 2134–37. https://doi.org/10.1161/01.CIR.101.18.2134.

Fernandes, Tiago, Valério G. Baraúna, Carlos E. Negrão, M. Ian Phillips, and Edilamar M. Oliveira. 2015. 'Aerobic Exercise Training Promotes Physiological Cardiac Remodeling Involving a Set of microRNAs'. American Journal of Physiology-Heart and Circulatory Physiology 309 (4): H543–52. https://doi.org/10.1152/ajpheart.00899.2014.

Hambrecht, R., V. Adams, S. Erbs, A. Linke, N.
Kra
¨
nkel, Y. Shu, Y. Baither, et al. 2003. 'Regular Physical Activity Improves Endothelial

Function in Patients With Coronary Artery Disease by Increasing Phosphorylation of Endothelial Nitric Oxide Synthase'. Circulation 107 (25): 3152–58. https://doi.org/10.1161/01.CIR.0000074229.93804.5C.

Haram, Per M., Ole J. Kemi, and Ulrik Wisloff. 1AD. 'Adaptation of Endothelium to Exercise Training: Insights from Experimental Studies' 13: 336–46. https://www.bioscience.org/2008/v13/af/2683/fulltext.htm.

Haram, Per Magnus, Volker Adams, Ole Johan Kemi, Alf O. Brubakk, Rainer Hambrecht, Øyvind Ellingsen, and Ulrik Wisløff. 2006. 'Time-Course of Endothelial Adaptation Following Acute and Regular Exercise'. European Journal of Cardiovascular Prevention & Rehabilitation 13 (4): 585–91. https://doi.org/10.1097/01.hjr.0000198920.57685.76.

Hawley, John A., Mark Hargreaves, Michael J. Joyner, and Juleen R. Zierath. 2014. 'Integrative Biology of Exercise'. Cell 159 (4): 738–49. https://doi.org/10.1016/j.cell.2014.10.029.

Hill, Maria, A. Wernig, and G. Goldspink. 2003. 'Muscle Satellite (Stem) Cell Activation during Local Tissue Injury and Repair'. Journal of Anatomy 203 (1): 89–99. https://doi.org/10.1046/j.1469-7580.2003.00195.x.

Hsu, Chiao-Po, Chun-Yao Huang, Jih-Shiuan Wang, Pi-Chi Sun, and Chun-Che Shih. 2008. 'Extracellular Matrix Remodeling Attenuated After Experimental Postinfarct Left Ventricular Aneurysm Repair'. The Annals of Thoracic Surgery 86 (4): 1243–49. https://doi.org/10.1016/j.athoracsur.2008.06.043.

Iemitsu, M., S. Maeda, T. Miyauchi, M. Matsuda, and H. Tanaka. 2005. 'Gene Expression Profiling of Exercise-Induced Cardiac Hypertrophy in Rats'. Acta Physiologica Scandinavica 185 (4): 259–70. https://doi.org/10.1111/j.1365-201X.2005.01494.x.

Iemitsu, Motoyuki, Seiji Maeda, Subrina Jesmin, Takeshi Otsuki, Yoshitoshi Kasuya, and Takashi Miyauchi. 2006. 'Activation Pattern of MAPK Signaling in the Hearts of Trained and Untrained Rats Following a Single Bout of Exercise'. Journal of Applied Physiology 101 (1): 151–63. https://doi.org/10.1152/japplphysiol.00392.2005.

Jørgensen, Sebastian B., Erik A. Richter, and Jørgen F. P. Wojtaszewski. 2006. 'Role of AMPK in Skeletal Muscle Metabolic Regulation and Adaptation in Relation to Exercise'. The Journal of Physiology 574 (1): 17–31. https://doi.org/10.1113/jphysiol.2006.109942.

KEMI, O, P HARAM, J LOENNECHEN, J OSNES, T SKOMEDAL, U WISLOFF, and O ELLINGSEN. 2005. 'Moderate vs. High Exercise Intensity: Differential Effects on Aerobic Fitness, Cardiomyocyte Contractility, and Endothelial Function'. Cardiovascular Research 67 (1): 161–72. https://doi.org/10.1016/j.cardiores.2005.03.010.

KEMI, O, M HOYDAL, P HARAM, A GARNIER, D FORTIN, R VENTURACLAPIER, and O ELLINGSEN. 2007. 'Exercise Training Restores Aerobic Capacity and Energy Transfer Systems in Heart Failure Treated with Losartan'. Cardiovascular Research 76 (1): 91–99. https://doi.org/10.1016/j.cardiores.2007.06.008.

Kemi, O. J., and U. Wisløff. 2010. 'Mechanisms of Exercise-Induced Improvements in the Contractile Apparatus of the Mammalian Myocardium'. Acta Physiologica 199 (4): 425–39. https://doi.org/10.1111/j.1748-1716.2010.02132.x.

Kemi, Ole J., Øyvind Ellingsen, Marcello Ceci, Serena Grimaldi, Godfrey L. Smith, Gianluigi Condorelli, and Ulrik Wisløff. 2007. 'Aerobic Interval Training Enhances Cardiomyocyte Contractility and Ca2+ Cycling by Phosphorylation of CaMKII and Thr-17 of Phospholamban'. Journal of Molecular and Cellular Cardiology 43 (3): 354–61. https://doi.org/10.1016/j.yjmcc.2007.06.013.

Kemi, Ole Johan, Marcello Ceci, Ulrik Wisloff, Serena Grimaldi, Paolo Gallo, Godfrey L Smith, Gianluigi Condorelli, and Oyvind Ellingsen. 2008. 'Activation or Inactivation of Cardiac Akt/mTOR Signaling Diverges Physiological from Pathological Hypertrophy'. Journal of Cellular Physiology 214 (2): 316–21. https://doi.org/10.1002/jcp.21197.

Kemi, Ole Johan, Per Magnus Haram, Ulrik Wisløff, and Øyvind Ellingsen. 2004. 'Aerobic Fitness Is Associated With Cardiomyocyte Contractile Capacity and Endothelial Function in Exercise Training and Detraining'. Circulation 109 (23): 2897–2904. https://doi.org/10.1161/01.CIR.0000129308.04757.72.

Kiens, Bente, and Erik A. Richter. 1998. 'Utilization of Skeletal Muscle Triacylglycerol during Postexercise Recovery in Humans'. American Journal of Physiology-Endocrinology and Metabolism 275 (2): E332–37. https://doi.org/10.1152/ajpendo.1998.275.2.E332.

Kong, Sek Won, Natalya Bodyak, Patrick Yue, Zhilin Liu, Jeffrey Brown, Seigo Izumo, and Peter M. Kang. 2005. 'Genetic Expression Profiles during Physiological and Pathological Cardiac Hypertrophy and Heart Failure in Rats'. Physiological Genomics 21 (1): 34–42. https://doi.org/10.1152/physiolgenomics.00226.2004.

KOVANEN, VUOKKO, HARRI SUOMINEN, and EINO HEIKKINEN. 1980. 'Connective Tissue of "fast" and "Slow" Skeletal Muscle in Rats...effects of Endurance Training'. Acta Physiologica Scandinavica 108 (2): 173–80. https://doi.org/10.1111/j.1748-1716.1980.tb06515.x.

Linke, Axel, Sandra Erbs, and Rainer Hambrecht. 1AD. 'Effects of Exercise Training upon Endothelial Function in Patients with Cardiovascular Disease' 13: 424–32. https://www.bioscience.org/2008/v13/af/2689/fulltext.htm.

Lundby, C., D. Montero, and M. Joyner. 2017. 'Biology of VO Max: Looking under the Physiology Lamp'. Acta Physiologica 220 (2): 218–28. https://doi.org/10.1111/apha.12827.

Maillet, Marjorie, Jop H. van Berlo, and Jeffery D. Molkentin. 2013. 'Molecular Basis of Physiological Heart Growth: Fundamental Concepts and New Players'. Nature Reviews Molecular Cell Biology 14 (1): 38–48. https://doi.org/10.1038/nrm3495.

Meeusen, R., M. F. Piacentini, B. Busschaert, L. Buyse, G. De Schutter, and J. Stray-Gundersen. 2004. 'Hormonal Responses in Athletes: The Use of a Two Bout Exercise Protocol to Detect Subtle Differences in (over)Training Status'. European Journal of Applied Physiology 91 (2–3): 140–46. https://doi.org/10.1007/s00421-003-0940-1.

Miyachi, M., M. Iemitsu, M. Okutsu, and S. Onodera. 1998. 'Effects of Endurance Training on the Size and Blood Flow of the Arterial Conductance Vessels in Humans'. Acta Physiologica Scandinavica 163 (1): 13–16. https://doi.org/10.1046/j.1365-201x.1998.0337f.x.

MURPHY, G, and H NAGASE. 2008. 'Progress in Matrix Metalloproteinase Research'. Molecular Aspects of Medicine 29 (5): 290–308. https://doi.org/10.1016/j.mam.2008.05.002.

Ramey, David W. 1999. How to Read a Scientific Paper. Vol. 45. AAEP PROCEEDINGS. https://pdfs.semanticscholar.org/104b/3127547393d6b94a8641100e9c297d653f56.pdf.

Reid, Michael B. 2005. 'Response of the Ubiquitin-Proteasome Pathway to Changes in Muscle Activity'. American Journal of Physiology-Regulatory, Integrative and Comparative Physiology 288 (6): R1423–31. https://doi.org/10.1152/ajpregu.00545.2004.

Rowe, Glenn C., Adeel Safdar, and Zolt Arany. 2014. 'Running Forward'. Circulation 129 (7): 798–810. https://doi.org/10.1161/CIRCULATIONAHA.113.001590.

Spence, Angela L., Howard H. Carter, Louise H. Naylor, and Daniel J. Green. 2013. 'A Prospective Randomized Longitudinal Study Involving 6 Months of Endurance or Resistance Exercise. Conduit Artery Adaptation in Humans'. The Journal of Physiology 591 (5): 1265–75. https://doi.org/10.1113/jphysiol.2012.247387.

Tsintzas, O. K., C. Williams, L. Boobis, and P. Greenhaff. 1996. 'Carbohydrate Ingestion and Single Muscle Fiber Glycogen Metabolism during Prolonged Running in Men'. Journal of Applied Physiology 81 (2): 801–9. https://doi.org/10.1152/jappl.1996.81.2.801.

Walter, G., K. Vandenborne, K. K. McCully, and J. S. Leigh. 1997. 'Noninvasive Measurement of Phosphocreatine Recovery Kinetics in Single Human Muscles'. American Journal of Physiology-Cell Physiology 272 (2): C525–34. https://doi.org/10.1152/ajpcell.1997.272.2.C525.

Wilkins, Benjamin J., Yan-Shan Dai, Orlando F. Bueno, Stephanie A. Parsons, Jian Xu, David M. Plank, Fred Jones, Thomas R. Kimball, and Jeffery D. Molkentin. 2004. 'Calcineurin/NFAT Coupling Participates in Pathological, but Not Physiological, Cardiac Hypertrophy'. Circulation Research 94 (1): 110–18. https://doi.org/10.1161/01.RES.0000109415.17511.18.

Williams, P E, and G Goldspink. n.d. 'Connective Tissue Changes in Immobilised Muscle' 138 (2): 343–50. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1164074/.

Wisløff, U. 2002. 'Aerobic Exercise Reduces Cardiomyocyte Hypertrophy and Increases Contractility, Ca2+ Sensitivity and SERCA-2 in Rat after Myocardial Infarction'. Cardiovascular Research 54 (1): 162–74. https://doi.org/10.1016/S0008-6363(01)00565-X.

Wisløff, Ulrik, Asbjørn Støylen, Jan P. Loennechen, Morten Bruvold, Øivind Rognmo, Per Magnus Haram, Arnt Erik Tjønna, et al. 2007. 'Superior Cardiovascular Effect of Aerobic Interval Training Versus Moderate Continuous Training in Heart Failure Patients'. Circulation 115 (24): 3086–94. https://doi.org/10.1161/CIRCULATIONAHA.106.675041.