

Faculty of Computing Health and Science

Research Unit Annual Report

RESEARCH UNIT NAME: Health and Wellness Institute

RESEARCH UNIT LEVEL (tick):

Level I Research Group

Level II Research Centre

X Level III Research Institute Centre of Excellence

YEAR: 2010

BRIEF OVERVIEW

Edith Cowan University's Health and Wellness Institute is a cross-disciplinary alliance of research centres and expertise with extensive national and international linkages. It is the first institute of its kind at an Australian University bringing together an expert team of researchers committed to improving community health and wellbeing. In partnership with national and international networks, it enhances collaboration and promotes a holistic approach to health and lifestyle. One of our principal publications for 2010 was published in the prestigious *Journal of Clinical Oncology* (Impact Factor: 17.157 ERA: A*) demonstrating the role of exercise in counteracting adverse effects from prostate cancer treatment and another was in *Circulation* (Impact factor 14.816. ERA: A*), which reported data from television viewing time and mortality from the Australian Diabetes, Obesity and Lifestyle Study.

Ongoing research will further support the community, with the Institute examining the role of exercise in:

- Men Receiving Therapy for Prostate Cancer
- Reducing Cardiovascular Risk Factors for Prostate Cancer Survivors
- Promoting Lifestyle Changes in Cancer Survivors
- Neoadjuvant Chemoradiation in Patients with Rectal Cancer
- Breast Cancer Related Lymphoedema
- Breast Cancer Related Bone Loss
- Cancer Patients with Advanced Bone Metastatic Disease
- Lung Cancer Patients
- Depression in Later Life
- Men's Health
- Parkinson's Disease

The Institute's work developing the Exercise and Sports Science Australia Position Statement on Exercise for Cancer Survivors has led to an increase in the number of accredited exercise physiologists trained in this clinical area, with cancer patients nationally benefiting from the research. The Institute has authored the Cancer Council of WA's Guidelines for Implementing Exercise Programs for Cancer Survivors, which forms the basis of a 12-week exercise program offered by the Cancer Council of WA

to the community. Internationally, the Institute has also co-authored Clinical Guidelines by the American College of Sports Medicine on exercise prescription for cancer survivors.

MEMBERSHIP

Academic Staff:

- A/Professor Daniel Galvão, Director, ECU Health and Wellness Institute
- Professor Rob Newton, Head of School, Exercise, Biomedical & Health Sciences
- Clinical Professor Nigel Spry, Sir Charles Gairdner Hospital
- Professor Dennis Taaffe, University of Newcastle
- Clinical Professor David Joseph, Sir Charles Gairdner Hospital
- Dr Prue Cormie, Postdoctoral Fellow, ECU Health and Wellness Institute
- Dr Michael Baker, Postdoctoral Fellow, ECU Health and Wellness Institute
- Dr Caroline McIntyre, Postdoctoral Fellow, ECU Health and Wellness Institute
- Dr Meghan Thomas, Postdoctoral Fellow, ECU Health and Wellness Institute, ParkC
- Dr Robert White, Postdoctoral Fellow, ECU Health and Wellness Institute, ParkC
- Professor David Dunstan, Baker IDI Heart and Diabetes Institute, ECU Health and Wellness Institute (Adjunct appointment)

Business Manager

- Ms Catherine Bell, Business Manager, ECU Health and Wellness Institute

Clinical Research Staff

- Ms Misha Burns, Research Assistant, ECU Health and Wellness Institute
- Mr Mark Trevaskis, Research Assistant, ECU Health and Wellness Institute
- Ms Debbie Cooper, Research Assistant, ECU Health and Wellness Institute
- Ms Courtney White, Research Assistant, ECU Health and Wellness Institute
- Mr Greg Levin, Research Assistant, ECU Health and Wellness Institute

Postgraduate Students:

- Ms Zoe Gibbs, PhD student
- Mr Favil Sing, PhD student
- Mr Greg Levin, PhD student
- Mr Brad Wall, PhD student
- Ms Sirikul Karuncharearnpanit, PhD student
- Ms Kate Bolam, PhD student
- Jacob Earp, PhD student
- Roger Pegoraro, PhD student
- Mr Kyle Smith, Masters student
- Maria Albertsen, PhD student

NEW GRANTS

ProCan For Life. \$590,000. Chief Investigators: Suzanne Chambers, Robert Newton, Frank Gardiner, Daniel Galvão. 2010-2013. Amount: Funding Agency: Cancer Australia (Category 1 scheme).

Prostate Cancer Foundation of Australia - Equipment Grant. \$80,000. 2010. pQCT XCT 3000 Clinical. Chief Investigators: Robert U. Newton, Daniel Galvão, Nigel Spry, David Joseph, Richard Prince, Dickon Hayne, Prue Cormie (Category 1 scheme).

Cancer Council of Western Australia and Cancer Council Queensland. \$100,350. 2010. Project Grant. Efficacy and safety of high versus low intensity resistance exercise, with and without compression for management of lymphedema in breast cancer survivors. Chief Investigators: Robert U. Newton, Sandi Hayes, Daniel Galvão, Dennis Taaffe, Bruce Cornish, Prue Cormie, Kazunori Nosaka. Associate Investigators: Nigel Spry, Kathryn Schmitz, Hildegard Reul-Hirche, Christine Smith.

Medical and Health Research Infrastructure Fund Round 14 – 2010 Western Australia Department of Health. \$23,013. Robert U. Newton.

Cancer Council of Western Australia, Early Career Investigator Research Grant, October 2010. Feasibility and efficacy of resistance exercise in prostate cancer survivors with bone metastases. Chief Investigators: P. Cormie, D.A. Galvão, R.U. Newton, N. Spry and D. Joseph. Amount: \$25,080.

Edith Cowan University, Early Career Research Grant, May 2010. Exercise as medicine for the management of lymphoedema in breast cancer survivors. Chief Investigators: P. Cormie and R.U. Newton. Amount: \$24,993.

Exercise for the Management of Lymphoedema in Breast Cancer Survivors. K Pumpa, P Cormie and DA Galvão. Amount: \$21,923. University of Canberra, DVCR Research Fellowship.

National Strength and Conditioning Association, NSCA Foundation Young Investigator Grant, June 2010. Mechanical specificity of weightlifting movements to athletic performance. Chief Investigator: P. Cormie. Amount: \$14,950 USD.

CONTINUING RESEARCH GRANTS

Prostate Cancer Foundation of Australia. Amount: \$476,024 (2009-2012). Chief Investigator: Daniel Galvão, Co-investigator: Robert Newton, Nigel Spry, Dennis R. Taaffe, James Denham. Associate Investigator: David Lamb, Gillian Duchesne, David Joseph. Population-based exercise intervention for prostate cancer patients – RADAR (Category 1 scheme).

NHMRC Project Grant 534409. Amount: \$500,000 (2009-2011). A Phase III clinical trial of exercise modalities on treatment side-effects in men receiving therapy for prostate cancer. Chief Investigators: Robert Newton, Dennis Taaffe, Nigel Spry, Daniel Galvão (Category 1 scheme).

Abbott Australasia Pty Ltd. \$170,000. (2009-2011). Lunclin Immediate Exercise Trial Robert Newton, Prue Cormie, Daniel Galvão.

Healthways. \$359,927. (2009-2011). Promoting Physical Activity to Improve the Outcome of Depression in Later Life (Activedep). Almedia Osvaldo, Robert Newton, Moira Sim et al.

PUBLICATIONS: JOURNAL ARTICLES

Galvão DA, Taaffe DR, Spry N, Joseph D, Newton RU. A combined resistance and aerobic exercise program reverses muscle loss in men undergoing androgen suppression therapy for prostate cancer without bone metastases: a randomized controlled trial. *Journal of Clinical Oncology* Jan 2010: 340–347. Impact Factor: 17.157 ERA: A*.

Schmitz K, Courneya KS, Matthews C, Demark-Wahnefried W, Galvão DA, Pinto BM, Irwin ML, Wollin K, Segal R, Lucia A, Schneider CM, Vongruenigen V, Schwartz A. American College of Sports

Medicine Guidelines on Exercise Testing and Prescription in Cancer Survivors. *Medicine and Science in Sports and Exercise* 2010;42(7):1409-1426. Impact Factor: 3.399 ERA: A*.

Peiffer JJ, Galvão DA, Zoe Gibbs Z, Kyle Smith K, Turner D, Foster J, Martins R, Newton RU. Strength and functional characteristics of men and women 65 years and older. *Rejuvenation Research*. 2010 Feb;13(1):75-82. Impact Factor: 5.008 ERA: A*.

González-Ravé, J.M., M. Delgado, M. Vaquero, D. Juarez and R.U. Newton. Changes in vertical jump height, anthropometric characteristics and biochemical parameters after contrast training in masters athletes and physically active older people. *Journal of Strength and Conditioning Research*, In press April 2010. Impact factor 1.457. ERA: C.

Bryant, A., M. Creaby, R.U. Newton, and J. Steele. Hamstring antagonist torque generated in vivo following ACL rupture and ACL reconstruction. *The Knee*, 17(4):287-90, 2010. Impact factor 1.126. ERA: C.

Cruise KE, RS Bucks, AM Loftus, RU Newton, R. Pegoraro, and MG Thomas. Exercise and Parkinson's: Benefits for Cognition and Quality of Life. *Acta Neurologica Scandinavica*, Mar 1. [Epub ahead of print], 2010. Impact factor 2.317. ERA: B.

Cormie, P., M.R. McGuigan and R.U. Newton. Changes in the eccentric phase contribute to improved SSC performance after training. *Medicine and Science in Sports and Exercise*, 42(9): 1731-1744, 2010. Impact factor 3.688. ERA: A*.

Cormie, P., M.R. McGuigan and R.U. Newton. Adaptations in athletic performance following ballistic power vs. strength training. *Medicine and Science in Sports and Exercise*, 42(8):1582-98, 2010. Impact factor 3.688. ERA: A*.

Cormie, P., M.R. McGuigan and R.U. Newton. Influence of strength on the magnitude & mechanisms of adaptation to power training. *Medicine and Science in Sports and Exercise*, 42(8):1566-81, 2010. Impact factor 3.688. ERA: A*.

Nimphius, S., McGuigan, M.R., and R.U. Newton. Relationship between strength, power, speed and change of direction performance of female softball players. *Journal of Strength and Conditioning Research*, 24(4): 885-895, 2010. Impact factor 1.457. ERA: C.

Pettigrew, S., M. Pescud, R. Donovan, R. U. Newton and D. Boldy. Mature adults' attitudes to mental health service utilisation. *Australian Psychologist*. 45(2): 141-150. 2010. Impact factor 1.007. ERA: B.

Frost, D.M., J. Cronin and R.U. Newton. A Biomechanical Evaluation of Resistance: Fundamental Concepts for Training and Sports Performance. *Sports Medicine*, 40(4): 303-326, 2010. Impact factor 3.6. ERA: A*.

Earp, J.E., W.J. Kraemer, R.U. Newton, B.A. Comstock, M.S. Fragala, C. Dunn-Lewis, G. Solomon-Hill, Z.R. Penwell, M.D. Powell, J.S. Volek, C.A. Denegar, K. Hakkinen, and C.M. Maresh. Lower-body muscle structure and its role in jump performance during squat, countermovement, and depth drop jumps. *Journal of Strength and Conditioning Research*, 24(3):722-729, March 2010. Impact factor 1.457. ERA: C.

De Villarreal, E.S., B. Requena and R.U. Newton. Does Plyometric Training Improve Strength Performance? A Meta-Analysis. *Journal of Science and Medicine in Sport*, In press August 2009. Impact factor 1.608. ERA: A.

Bevan, H.R., P. Bunce, N.J. Owen, M. Bennett, D.J. Cunningham, R.U. Newton and L.P. Kilduff. Optimal Loading for the Development of Peak Power output in Professional Rugby Players. *Journal of Strength and Conditioning Research*, 24(1):43-47, 2010. Impact factor 1.741. ERA: C

Frost, D.M., J.B. Cronin and R.U. Newton. A novel approach to identify the end of the concentric phase during ballistic upper body movements. *Journal of Strength and Conditioning Research*, 24(1): 282-286, 2010. Impact factor 1.457. ERA: C.

Kraemer WJ, MF Joseph, JS Volek, JR Hoffman, NA Ratamess, RU Newton, MS Fragala, DN French, MA Rubin, TP Scheett, MR McGuigan, GA Thomas, AL Gome, K Häkkinen, and CM Maresh. Endogenous opioid peptide responses to opioid and anti-inflammatory medications following eccentric exercise-induced muscle damage. *Peptides*. 31(1): 88-93. 2010. Impact factor 2.705. ERA: B.

Vanwanseele B, Eckstein F, Smith RM, Lange AK, Foroughi N, Baker MK, Shnier R, Fiatarone Singh MA. *The relationship between knee adduction moment and cartilage and meniscus morphology in women with osteoarthritis*. *Osteoarthritis and Cartilage*. 18:7, 2010. Impact factor 4.08. ERA: A.

Foroughi N, Smith RM, Lange AK, Baker MK, Fiatarone Singh MA, Vanwanseele B. *Dynamic alignment and its association with knee adduction moment in medial knee osteoarthritis*. *Knee*. 17:3, 2010. Impact factor 1.126. ERA: C.

McBride, J.M., Cormie, P., McCaulley, G.O., Nuzzo, J.L., Dayne, A.M., Haines, T.L., Kirby, T.J. and Triplett, N.T. The influence of increased eccentric loading and series elastic component muscle stiffness on stretch-shortening cycle performance. *Journal of Strength and Conditioning Research* (in press accepted 12 January, 2010). Impact factor 1.457. ERA: C.

Courneya, K.S., Stevinson, C., McNeely, M.L., Sellar, C.M., Peddle, C.J., Friedenreich, C.M., Mazurek, A., Chua, N., Tankel, K., Basi, S., & Reiman, T. (2010). Predictors of adherence to supervised aerobic exercise in lymphoma patients receiving chemotherapy or no treatments. *Annals of Behavioral Medicine*, 39, s97, B107. Impact factor 3.145. ERA: A.

McNeely, M.L., Peddle, C.J., Yurick, J., Dayes, I.S., Mackey, J.R. (2010) Conservative and Dietary Interventions for Cancer-Related Lymphedema: a Systematic Review and Meta-Analysis. *Cancer*, 117(6):1136-48. Impact Factor 5.4. ERA: A.

Kilbreath, S.L., Ward, L.C., Lane, K., Margaret McNeely, M., Dylke, E.S., Refshauge, K.M., Don McKenzie, D, MiJoung Lee, Peddle, C.J., Battersby, K.J. (2010). Effect of airplane travel on lymphedema risk in women with a history of breast cancer. *Breast Cancer Research and Treatment*, 120(3), 649-54. Impact Factor 4.7. ERA: A.

Courneya KS, Stevinson C, McNeely ML, Sellar CM, Peddle CJ, Friedenreich CM, Mazurek A, Chua N, Tankel K, Basi S, Reiman T. (2010) Predictors of adherence to supervised exercise in lymphoma patients participating in a randomized controlled trial. *Ann Behav Med*, 40(1), 30-9. Impact Factor 3.1. ERA: A.

Thomas, M. (2010). Role of transcription factors in cell replacement therapies for neurodegenerative conditions. *Regenerative Medicine* 5, 441-450. Impact Factor 2.786.

Leong E, Chen WW, Ng E, Van Hazel G, Mitchell A, Spry N. Outcomes from Combined Chemoradiotherapy in Unresectable and Locally Advanced Resected Cholangiocarcinoma. *J Gastrointest Cancer*. 2010 Oct 30. [Epub ahead of print] PubMed PMID: 21049308.

Platell C, Zeps N, Joseph D, Spry N, Iacopetta B, Caruso V. Tumour banking as part of routine clinical practice. *ANZ J Surg*. 2010 Apr;80(4):203-4. PubMed PMID:20575941. Impact factor: 1.344. ERA: C.

Leong T, Joon DL, Willis D, Jayamoham J, Spry N, Harvey J, Di Iulio J, Milner A, Mann GB, Michael M. Adjuvant chemoradiation for gastric cancer using epirubicin, cisplatin, and 5 fluorouracil before and after three-dimensional conformal radiotherapy with concurrent infusional 5-fluorouracil: a multicenter study of the Trans-Tasman Radiation Oncology Group. *Int J Radiat Oncol Biol Phys*. 2011 Mar 1;79(3):690-5. Epub 2010 May 14. PubMed PMID: 20472363. Impact factor: 4.592. ERA: A.

Ebert MA, Haworth A, Kearvell R, Hooton B, Hug B, Spry NA, Bydder SA, Joseph DJ. Comparison of DVH data from multiple radiotherapy treatment planning systems. *Phys Med Biol*. 2010 Jun 7;55(11):N337-46. Epub 2010 May 12. PubMed PMID:20463378. Impact factor: 2.781. ERA: A.

Halkett G, Aoun S, Hayne D, Lund JA, Gruen A, Villa J, Livi L, Arcangeli S, Velikova G, Spry N; EORTC Quality of Life Group. EORTC radiation proctitis-specific quality of life module - pretesting in four European countries. *Radiother Oncol*. 2010 Nov;97(2):294-300. Epub 2010 May 4. PubMed PMID:20447707. Impact factor: 4.343. ERA: C.

Delahunt B, Lamb DS, Srigley JR, Murray JD, Wilcox C, Samaratunga H, Atkinson C, Spry NA, Joseph D, Denham JW. Gleason scoring: a comparison of classical and modified (international society of urological pathology) criteria using nadir PSA as a clinical end point. *Pathology*. 2010 Jun;42(4):339-43. PubMed PMID: 20438406. Impact factor 2.673. ERA: A*.

Lamb DS, Denham JW, Joseph D, Matthews J, Atkinson C, Spry NA, Duchesne G, Ebert M, Steigler A, Delahunt B, D'Este C. A comparison of the prognostic value of early PSA test-based variables following external beam radiotherapy, with or without preceding androgen deprivation: analysis of data from the TROG 96.01 randomized trial. *Int J Radiat Oncol Biol Phys*. 2011 Feb 1;79(2):385-91. Epub 2010 Mar 28. PubMed PMID: 20350786. Impact factor 4.592. ERA: A.

Halkett GK, Kristjanson LJ, Lobb E, O'Driscoll C, Taylor M, Spry N. Meeting breast cancer patients' information needs during radiotherapy: what can we do to improve the information and support that is currently provided? *Eur J Cancer Care (Engl)*. 2010 Jul;19(4):538-47. Epub 2009 Aug 25. PubMed PMID: 19708930. Impact factor 1.1. ERA: A*.

Tiong, A.; Bydder, S.; Ebert, M.; Caswell, N.; Waterhouse, D.; Spry, N.; Camille, P.; Joseph, D. A Small Tolerance for Catheter Displacement in High-Dose Rate Prostate Brachytherapy Is Necessary and Feasible *Int J Radiat Oncol Biol Phys* (2010) 76 4 1066 – 1072. Impact factor 4.592. ERA: A.

Gray AJ, Jenkins D, Andrews MH, Taaffe DR, Glover ML. Validity and reliability of GPS for measuring distance travelled in field-based team sports. *J Sports Sci*. 2010 Oct;28(12):1319-25. PubMed PMID: 20859825. Impact factor 1.619. ERA: B.

Pöllänen E, Fey V, Törmäkangas T, Ronkainen PH, Taaffe DR, Takala T, Koskinen S, Cheng S, Puolakka J, Kujala UM, Suominen H, Sipilä S, Kovanen V. Power training and postmenopausal hormone therapy affect transcriptional control of specific co-regulated gene clusters in skeletal muscle. *Age (Dordr)*. 2010 Sep;32(3):347-63. Epub 2010 Apr 13. PubMed PMID: 20640546; PubMed Central PMCID: PMC2926854. Impact factor 5.839. ERA: C.

Skinner TL, Jenkins DG, Coombes JS, Taaffe DR, Leveritt MD. Dose response of caffeine on 2000-m rowing performance. *Med Sci Sports Exerc*. 2010 Mar;42(3):571-6. PubMed PMID: 19952822. Impact factor 3.707. ERA: A*.

Lang T, Streeper T, Cawthon P, Baldwin K, Taaffe DR, Harris TB. Sarcopenia: etiology, clinical consequences, intervention, and assessment. *Osteoporos Int*. 2010 Apr;21(4):543-59. Epub 2009 Sep 25. Review. PubMed PMID: 19779761; PubMed Central PMCID: PMC2832869. Impact factor 4.997. ERA: A.

Owen N, Sparling PB, Healy GN, Dunstan DW, Matthews CE. Sedentary behavior:emerging evidence for a new health risk. *Mayo Clin Proc*. 2010 Dec;85(12):1138-41. PubMed PMID: 21123641; PubMed Central PMCID: PMC2996155. Impact factor 4.973. ERA: A.

Lynch BM, Healy GN, Dunstan DW, Owen N. Sedentary versus inactive:distinctions for disease prevention. *Nat Rev Cardiol*. 2010 Nov;7(11):doi:10.1083/nrcardio.2010.68-c1; author reply doi:10.1083/nrcardio.2010.68-c2. PubMed PMID: 21080592.

Clark BK, Healy GN, Winkler EA, Gardiner PA, Sugiyama T, Dunstan DW, Matthews CE, Owen N. Relationship of Television Time with Accelerometer-Derived Sedentary Time: NHANES. *Med Sci Sports Exerc*. 2011 May;43(5):822-8. PubMed PMID: 20980928. Impact factor 3.707. ERA: A*.

Clark BK, Sugiyama T, Healy GN, Salmon J, Dunstan DW, Shaw JE, Zimmet PZ, Owen N. Socio-demographic correlates of prolonged television viewing time in Australian men and women: the AusDiab study. *J Phys Act Health*. 2010 Sep;7(5):595-601. PubMed PMID: 20864754. ERA: B.

van Uffelen JG, Wong J, Chau JY, van der Ploeg HP, Riphagen I, Gilson ND, Burton NW, Healy GN, Thorp AA, Clark BK, Gardiner PA, Dunstan DW, Bauman A, Owen N, Brown WJ. Occupational sitting and health risks: a systematic review. *Am J Prev Med*. 2010 Oct;39(4):379-88. Review. PubMed PMID: 20837291. Impact factor 4.235. ERA: B.

Chau JY, der Ploeg HP, van Uffelen JG, Wong J, Riphagen I, Healy GN, Gilson ND, Dunstan DW, Bauman AE, Owen N, Brown WJ. Are workplace interventions to reduce sitting effective? A systematic review. *Prev Med*. 2010 Nov;51(5):352-6. Epub 2010 Aug 27. Review. PubMed PMID: 20801153. Impact factor 3.172. ERA: A.

Lynch BM, White SL, Owen N, Healy GN, Chadban SJ, Atkins RC, Dunstan DW. Television viewing time and risk of chronic kidney disease in adults: the AusDiab Study. *Ann Behav Med*. 2010 Dec;40(3):265-74. PubMed PMID: 20740391. Impact factor 3.084. ERA: A.

Eakin EG, Reeves MM, Marshall AL, Dunstan DW, Graves N, Healy GN, Bleier J, Barnett AG, O'Moore-Sullivan T, Russell A, Wilkie K. Living Well with Diabetes: a randomized controlled trial of a telephone-delivered intervention for maintenance of weight loss, physical activity and glycaemic control in adults with type 2 diabetes. *BMC Public Health*. 2010 Aug 3;10:452. PubMed PMID:

20678233; PubMed Central PMCID: PMC2927539. Impact factor 2.223. ERA: B.

Lynch BM, Dunstan DW, Winkler E, Healy GN, Eakin E, Owen N. Objectively assessed physical activity, sedentary time and waist circumference among prostate cancer survivors: findings from the National Health and Nutrition Examination Survey (2003-2006). *Eur J Cancer Care (Engl)*. 2010 Jun 29. [Epub ahead of print] PubMed PMID: 20597954. Impact factor 1.1. ERA: A*.

Owen N, Healy GN, Matthews CE, Dunstan DW. Too much sitting: the population health science of sedentary behavior. *Exerc Sport Sci Rev*. 2010 Jul;38(3):105-13. PubMed PMID: 20577058. Impact factor 3.228. ERA: A.

Anuradha S, Dunstan DW, Healy GN, Shaw JE, Zimmet PZ, Wong TY, Owen N. Physical activity, television viewing time, and retinal vascular caliber. *Med Sci Sports Exerc*. 2011 Feb;43(2):280-6. PubMed PMID: 20543753. Impact factor 3.707. ERA: A*.

Gagnon C, Magliano DJ, Ebeling PR, Dunstan DW, Zimmet PZ, Shaw JE, Daly RM. Association between hyperglycaemia and fracture risk in non-diabetic middle-aged and older Australians: a national, population-based prospective study (AusDiab). *Osteoporos Int*. 2010 Dec;21(12):2067-74. Epub 2010 Mar 20. PubMed PMID: 20306023. Impact factor 4.997. ERA: A.

Wijndaele K, Healy GN, Dunstan DW, Barnett AG, Salmon J, Shaw JE, Zimmet PZ, Owen N. Increased cardiometabolic risk is associated with increased TV viewing time. *Med Sci Sports Exerc*. 2010 Aug;42(8):1511-8. PubMed PMID: 20139784. Impact factor 3.707. ERA: A*.

Dunstan DW, Barr EL, Healy GN, Salmon J, Shaw JE, Balkau B, Magliano DJ, Cameron AJ, Zimmet PZ, Owen N. Television viewing time and mortality: the Australian Diabetes, Obesity and Lifestyle Study (AusDiab). *Circulation*. 2010 Jan 26;121(3):384-91. Epub 2010 Jan 11. PubMed PMID: 20065160. Impact factor 14.816. ERA: A*

White SL, Dunstan DW, Polkinghorne KR, Atkins RC, Cass A, Chadban SJ. Physical inactivity and chronic kidney disease in Australian adults: the AusDiab study. *Nutr Metab Cardiovasc Dis*. 2011 Feb;21 (2):104-12. Epub 2009 Nov 25. PubMed PMID: 19939649. Impact factor 3.517. ERA: A.

Thorp AA, Healy GN, Owen N, Salmon J, Ball K, Shaw JE, Zimmet PZ, Dunstan DW. Deleterious associations of sitting time and television viewing time with cardiometabolic risk biomarkers: Australian Diabetes, Obesity and Lifestyle (AusDiab) study 2004-2005. *Diabetes Care*. 2010 Feb;33(2):327-34. Epub 2009 Nov 16. PubMed PMID: 19918003; PubMed Central PMCID: PMC2809275. Impact factor 6.718. ERA: A*.

Lynch BM, Dunstan DW, Healy GN, Winkler E, Eakin E, Owen N. Objectively measured physical activity and sedentary time of breast cancer survivors, and associations with adiposity: findings from NHANES (2003-2006). *Cancer Causes Control*. 2010 Feb; 21(2):283-8. Epub 2009 Nov 1. PubMed PMID: 19882359. Impact factor 3.199. ERA: A.

White, R.B., Bierinx, A.B., Gnocchi, V.F., and Zammit, P.S. (2010) Dynamics of muscle fibre growth during postnatal mouse development. *BMC Developmental Biology*: 10(21). doi:10.1186/1471-213X-10-21 Impact factor: 3.290. ERA: B.

BOOK CHAPTERS

- Marco Cardinale, Rob Newton, and Kazunori Nosaka. Strength and Conditioning Biological Principles and Practical Applications. John Wiley & Sons, Ltd. ISBN 978-0-470-01918-4. 2010.
- Galvão, D.A., D.R. Taaffe, N. Spry and R.U. Newton. Physical Activity and Genitourinary Cancer Survivorship. Physical Activity and Cancer, Recent Results in Cancer Research 186. K.S. Courneya and C.M. Friedenreichs (Eds). Springer-Verlag Berlin 2010.
- Newton, R.U. Strength and Conditioning Biomechanics. Strength and Conditioning Biological Principles and Practical Applications. Marco Cardinale, Rob Newton, and Kazunori Nosaka (Eds). John Wiley & Sons, Ltd. Sydney. 2010.
- Newton, R.U., Prue Cormie and Marco Cardinale. Principles of Athlete Testing. Strength and Conditioning Biological Principles and Practical Applications. Marco Cardinale, Rob Newton, and Kazunori Nosaka (Eds). John Wiley & Sons, Ltd. Sydney. 2010.
- Newton, R.U. and Marco Cardinale. Total Athlete Management (TAM) and Performance Diagnosis. Strength and Conditioning Biological Principles and Practical Applications. Marco Cardinale, Rob Newton, and Kazunori Nosaka (Eds). John Wiley & Sons, Ltd. Sydney. 2010.
- Stone, M.H., Cormie, P., Lamont, H. and Stone, M.E. Developing strength and power. In United Kingdom Strength and Conditioning Association's Strength & Conditioning Textbook. Jeffreys, I. (Ed), Routledge, Oxford, UK. In Press.
- Newton, R.U., Cormie, P. and Cardinale, M. Principles of athlete testing. In Strength and Conditioning: Biological Principles and Practical Applications. Cardinale, M., Newton, R.U. and Nosaka, K (Eds), Wiley-VCH, Germany. p 253-270. 2010. ISBN: 0-470-01918-2.

REFEREED CONFERENCE PROCEEDINGS AND ABSTRACTS

Due to limited space, in this report conference presentations including invited presentations are not included. However, it should be noted that our members made more than 53 presentations in 2010 in various International/National conferences and meetings.

HIGHER DEGREE BY RESEARCH LOAD (list name of candidate and degree type)

- Ms Zoe Gibbs, PhD student
- Mr Favil Sing, PhD student
- Mr Greg Levin, PhD student
- Mr Brad Wall, PhD student
- Ms Sirikul Karuncharearnpanit, PhD student
- Ms Kate Bolam, PhD student
- Jacob Earp, PhD student
- Roger Pegoraro, PhD student
- Mr Kyle Smith, Masters student
- Maria Albertsen, PhD student

HIGHER DEGREE BY RESEARCH COMPLETIONS (List name, degree, title of thesis) N/A

VISITORS AND COLLABORATIONS (List the organisation's name and short summary of the nature of the collaboration. Separate into local, national and international)

State/National: Various research projects and community programs continue collaboration with the Cancer Council of Western Australia; Cancer Council of Queensland; Prostate Cancer Foundation of Australia; Sir Charles Gairdner Hospital; Fremantle Hospital; IDI Heart and Diabetes Institute; The University of Queensland, University of Newcastle, Queensland University of Technology, Mater Hospital Newcastle.

International: Massey University and Otago University NZ, RADAR exercise clinical trial; American College of Sports Medicine Consensus Statement on Exercise and Cancer; *Medicine and Science in Sports and Exercise* 2010;42(7):1409-1426. Impact Factor: 3.399 ERA: A*. Collaborators: Canada, Alberta Kerry S. Courneya, Professor and Canada Research Chair in Physical Activity and Cancer, Faculty of Canada, Ontario, Roanne Segal, Medical Oncologist, Clinical Scientist-OHRI, Associate Professor of Medicine, University of Ottawa, Regional Cancer Center; Spain, Madrid, Alexandro Lucia, Professor, Universidad Europea de Madrid; USA, Philadelphia, Kathryn H. Schmitz, Associate Professor, University of Pennsylvania School of Medicine, Division of Clinical Epidemiology, Department of Biostatistics and Epidemiology, Center for Clinical Epidemiology and Biostatistics, Center for Public Health Initiatives, Abramson Cancer Center; USA, Rhode Island, Bernardine M. Pinto, Professor The Miriam Hospital and the Warren Alpert Medical School of Brown, University, Centers for Behavioral and Preventive Medicine; USA, Birmingham, Wendy Demark-Wahnefried, Professor and Webb Chair of Nutrition Sciences, Associate Director of Prevention & Control, University of Alabama, Comprehensive Cancer Ctr; USA, Colorado, Carole M. Schneider, Professor and Director, Rocky Mountain Cancer Rehabilitation Institute, Sport and Exercise Science, University of Northern Colorado; USA, Phoenix, Anna L. Schwartz, Professor and the Scottsdale Healthcare Cancer Research Endowed Chair at Arizona State University; USA, Connecticut, Melinda L. Irwin, Associate Professor of Epidemiology and Public Health Yale School of Medicine; USA, Maryland, Matthews Charles, Associate Professor, Division of Cancer Epidemiology and Genetics, Nutritional Epidemiology Branch, National Cancer Institute, National Institute of Health; USA, Ohio, Vivian von Gruenigen, Associate Professor, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Summa Akron City Hospital; USA, St Louis, Kathleen Y. Wolinn, Assistant Professor of Surgery, Washington University School of Medicine, Department of Community Health, School of Public Health, St. Louis University.

Visitors

Visit from PCFA, April 2010; Visitors from DIISR/DEEWR, May 2010; Meeting SCGH, May 2010. Visitors RMIT Melbourne, July 2010.

COMMUNITY ENGAGEMENT ACTIVITIES AND LINKAGES (Provide a brief overview of any significant activity)

The Institute has co-authored Guidelines and Consent Statements for the following national and international organisations:

- State: The Cancer Council of Western Australia evaluation of the Life Now Exercise Program.
- Galvao DA. A member of the Research Grants Committee of the Medical and Scientific Advisory Panel from The Cancer Council of Western Australia.
- Baker M. Exercise and Sport Science External Advisory Committee Faculty of Health Sciences, University of Sydney.
- Osteoporosis Working Model, Department of Health, Government of Western Australia. 2010.

- Nationally: The Exercise and Sports Science Australia (ESSA) Position Statement on Exercise for Cancer Survivors.
- Newton RU. A member of the Research Grants Committee for Prostate cancer Foundation of Australia.
- Newton RU. Research Advisory Board, Australian Primary Health Care Research Institute, The Australian National University.
- Internationally: The influential American College of Sports Medicine's (ACSM) Consensus Statement on Exercise Guidelines for Cancer Survivors.

FUTURE PLANS AND DIRECTION (Provide an overview)

The Institute has established that exercise can reverse a series of debilitating side effects from androgen deprivation therapy which is widely employed in the management of prostate cancer. The focus of the interventions to date has been to reduce established medical treatment toxicity. Future research work will: 1) explore how improving the patient's physical condition prior to surgery enhances functional recovery after major urological operations, 2) examine how the timing of intervention affects outcomes, 3) determine if exercise can be safely employed in the patient with advanced and metastatic cancer that affects the bones, 4) examine exercise interventions for lung cancer patients, and 5) define the benefit profiles of different exercise strategies. The Institute's priority is to continue applying for and attracting national competitive external funding from organisations such as the NHMRC and the Prostate Cancer Foundation of Australia, as well as external fellowship support (e.g. Cancer Council of WA and NHMRC) to finance current and future research activities.

DATE OF NEXT FORMAL REVIEW

End of 2014.