RAINE STUDY NEWSLETTER

UPDATE FROM 23 YEAR FOLLOW-UP

Over 650 Raine Study Participants have completed an overnight sleep study at the UWA Centre for Sleep Science. The follow up is going well: there are 19 people currently in the Raine Study Team with a further eight sleep technologists and overnight volunteers as well as laboratory based staff involved in the complicated recruitment, booking, rescheduling, staffing of 4 nights and 4 morning sessions per week as well as ad hoc weekends. The assessment comprises anthropomorphic measurements, blood pressure, cold and pressure testing, cognitive function testing, questionnaires, asthma and lung function testing, allergy testing, physical strength tests, mole count, skin impression, 3D face photos, shower, dinner, actigraphy set up and sleep set up. The morning comprises removal of sleep study leads, an asthma challenge test, blood sample, breakfast, actigraphs to wear for a week and participants are given their own sleep study results. In addition, every three months for a year participants are sent an SMS text checking whether they have lost any work time due to poor health.

The Raine Study team are to be congratulated on this amazing organisational feat, and the wonderful teamwork involved. ***A big thank you to all Raine Study Participants for doing this!***

RAINE STUDY SCIENTIFIC MEETING – 2 Aug

The 2013 Raine Study Annual Scientific Meeting is on 2 August 2013 at the UWA Club. This is an all day event which will showcase the broad scope of research being undertaken by Raine researchers. ***If you or one of your students are interested in presenting your research please complete an abstract form and return to Jenny before 15 July.*** Presentations will be short (10mins) with 5 mins for questions. The Raine Medical Research Foundation has kindly donated prizes for the best presentations.

MEETING DATES - 2013

EXECUTIVE MEETINGS

Date	Deadline for Items*
Tues 30 July	Tuesday 16 July
Wed 27 Nov	Tues 5 Feb

Executive approval by electronic meeting deadlines:
August 15, September 16, October 15, December 13

Core Management Meetings
Wednesday 23 October 2013

Annual Scientific Meeting – 2 August
RSVP - ASAP and by 22 July
Submit presentation abstract by 15 July

UPDATE FROM THE RAINE STUDY EXECUTIVE COMMITTEE

Prof Fiona Stanley resigned from the Raine Study Executive Committee at the beginning of the year. The Committee thanked her for her wonderful commitment and involvement with the Raine Study over the past 23 years and for her time and efforts on the Committee. Prof George Yeoh recently announced his retirement from the Committee. George fulfilled an outstanding role on the Committee, strengthening the links between the Raine Study and the Raine Medical Research Foundation. Prof Paul Norman will be the Raine Medical Research Foundation representative.

Prof Craig Pennell and Prof David Mackey have joined the Raine Study Executive Committee. Other members include Prof Prof Ian Puddey (Chairman), Prof John Newnham, Prof Lou Landau, Prof Lawrie Beilin, Prof Jennie Blackwell, Prof Nick de Klerk, Prof David Mackey and Prof Leon Straker .

20 Projects have been approved and are available on the Raine Study Website

To date 54 papers were published in 2012 and 29 in 2013 (list attached).

Raine Study Nomenclature

The way in which the Raine Study is named in publications and media releases is starting to mutate into new forms. The Executive have approved a standardised naming system. This is available to all researchers and is on the website.

GROUP MEETINGS – SCIENTIFIC DIRECTORS

Meetings between research groups and the Scientific Directors are underway. These meetings provide an opportunity to meet and talk, to establish who is who in the different groups, what everyone is doing, update on progress, projects and manuscripts and discuss future plans. These meetings are replacing the bi-monthly Core Management Group meetings. There is one Core Management Group meeting scheduled on the 23 October and we plan to organise an informal social meeting near the end of the year

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20 year Raine Study Data

The data collected at the 20 year follow up is available to researchers. Please note the following when copy/pasting methodology from previous papers (i) The assessment was done at Lions Eye Institute and Departments in SCGH, so some measures (eg height and weight) were done on different equipment (ii) Ethics approval was obtained from UWA (not PMH or KEMH!) (iii) The DEXA scans were funded by an NIH Grant - CIs included Craig Pennell and Steve Lye (iv) Eye data collection was funded by a variety of sources, and this also funded all the core follow up measurements and questionnaire data. Please contact Jenny is you require clarification on any of these issues.

FORMS and Raine Study Procedures

Please note: P-forms must be completed for all new projects, any grant application and any new student. C-Forms must be completed for any new collaborations. P and C forms are submitted to the Executive for approval (see meeting deadline dates*). M forms must to be completed for any manuscript – before the final manuscript is submitted, and before work is started on the manuscript. M-Forms should be linked to an approved P-Form. The Raine Management uses these forms to check various important issues e.g. overlap, availability of data, collaboration, merit, etc. All approved forms are available on the Raine Study Website. We are in the process of updating the forms and automating the process, in the meantime please complete the old forms.

Raine Study Publications 2013 (Jan-June)

1. Allen KL, Byrne SM, Oddy WH, Crosby RD. Early Onset Binge Eating and Purging Eating Disorders: Course and Outcome in a Population-Based Study of Adolescents. J Abnorm Child Psychol. 2013 Apr 19.
2. Ambrosini GL, Oddy WH, Huang RC, Mori TA, Beilin LJ, Jebb SA. Prospective associations between sugar-sweetened beverage intakes and cardiometabolic risk factors in adolescents. Am J Clin Nutr. 2013 May 29.
3. Astfalck RG, O'Sullivan PB, Smith AJ, Straker LM, Burnett AF. Lumbar spine repositioning sense in adolescents with and without non-specific chronic low back pain - An analysis based on sub-classification and spinal regions. Man Ther. 2013 Mar 18.
4. Benyamin B, Pourcain B, Davis OS, Davies G, Hansell NK, Brion MJ,et al. Genome-wide association and longitudinal analyses reveal genetic loci linking pubertal height growth, pubertal timing and childhood adiposity. Hum Mol Genet. 2013 Mar 21.
6. Farrant BM, Mattes E, Keelan JA, Hickey M, Whitehouse AJO. Fetal Testosterone, Socio-Emotional Engagement and Language Development. Infant and Child Development. 2013;22(2):119-32.
7. Fernandez-Rhodes L, Demerath EW, Cousminer DL, et al. Association of Adiposity Genetic Variants With Menarche Timing in 92,105 Women of European Descent. Am J Epidemiol. 2013 Apr 4.
8. Gill DK, Davis MC, Smith AJ, Straker LM. Bidirectional relationships between cigarette use and spinal pain in adolescents accounting for psychosocial functioning. British journal of health psychology. 2013 Apr 2.
9. Hands B, Larkin D, Rose E. The psychometric properties of the McCarron Assessment of Neuromuscular Development as a longitudinal measure with Australian youth. Human Movement Science. 2013(0).
10. Hollier LP, Mattes E, Maybery MT, Keelan JA, Hickey M, Whitehouse AJ. The association between perinatal testosterone concentration and early vocabulary development: A prospective cohort study. Biol Psychol. 2013 13;92(2):212-5.
11. Horikoshi M, Yaghootkar H, Mook-Kanamori DO,et al. New loci associated with birth weight identify genetic links between intrauterine growth and adult height and metabolism. Nat Genet. 2013 Jan;45(1):76-82.
12. Huang RC, Beilin LJ, Ayonrinde O, Mori TA, Olynyk JK, Burrows S, Hands B, Adams LA. The importance of cardio-metabolic risk factors in the association between non alcoholic fatty liver disease and arterial stiffness. Hepatology. 2013 May 22.
13. Johnson S, Li J, Kendall G, Strazdins L, Jacoby P. Mothers' and Fathers' Work Hours, Child Gender, and Behavior in Middle Childhood. Journal of Marriage and Family. 2013;75(1):56-74.
14. Le-Ha C, Beilin LJ, Burrows S, Huang RC, Oddy WH, Hands B, Mori TA. Gender Difference in the Relationship between Passive Smoking Exposure and HDL-Cholesterol Levels in Late Adolescence. J Clin Endocrinol Metab. 2013 April 30, 2013.
15. Li J, Robinson M, Malacova E, Jacoby P, Foster J, van Eekelen A. Maternal Life Stress Events in Pregnancy Link to Children's School Achievement at Age 10 Years. J Pediatr. 2013 Oct 17;162:483-9.
16. Lu Y, Vitart V, et al. Genome-wide association analyses identify multiple loci associated with central corneal thickness and keratoconus. Nat Genet. 2013;45(2):155-63.
17. Nyaradi A, Li J, Hickling S, Foster J, Oddy WH. The role of nutrition in children's neurocognitive development, from pregnancy through childhood. Frontiers in human neuroscience. 2013;7:97.
18. Oddy WH, Herbison CE, Jacoby P, Ambrosini GL, O'Sullivan TA, Ayonrinde OT, Olynyk JK, Black LJ, Beilin LJ, Mori TA, Hands BP, Adams LA. The Western Dietary Pattern Is Prospectively Associated With Nonalcoholic Fatty Liver Disease in Adolescence. Am J Gastroenterol. 2013.
19. Reynolds RM, Hii HL, Pennell CE, McKeague IW, Kloet ERd, Lye S, Stanley FJ, Mattes E, Foster JK. Analysis of baseline hypothalamic-pituitary-adrenal activity in late adolescence reveals gender specific sensitivity of the stress axis. Psychoneuroendocrinology. 2013 **38**(8):1271-80.
20. Robinson M, Oddy WH, Whitehouse AJO, Pennell CE, Kendall GE, McLean NJ, Jacoby P, Zubrick SR, Stanley FJ, Newnham JP. Hypertensive diseases of pregnancy predict parent-reported difficult temperament in infancy. J Dev Behav Pediatr. 2013;34(3):174-80.
21. Robinson M, Whitehouse AJ, Zubrick SR, Pennell CE, Jacoby P, McLean NJ, Oddy WH, Hammond G, Stanley FJ, Newnham JP. Delivery at 37 weeks' gestation is associated with a higher risk for child behavioural problems. Aust N Z J Obstet Gynaecol. 2013 22;doi: 10.1111/ajo.12012.

22. Robinson M, Whitehouse AJO, Jacoby P, Mattes E, Sawyer MG, Keelan JA, Hickey M. Umbilical Cord Blood Testosterone and Childhood Internalizing and Externalizing Behavior: A Prospective Study. PLoS ONE. 2013;8(4):e59991.
23. Robinson M, Zubrick SR, Pennell CE, Van Lieshout RJ, Jacoby P, Beilin LJ, Mori TA, Stanley FJ, Newnham JP, Oddy WH. Pre-pregnancy maternal overweight and obesity increase the risk for affective disorders in offspring. Journal of Developmental Origins of Health and Disease. 2013;4(1):42-8.
24. Sanfilippo PG, Hewitt AW, Mountain JA, Mackey DA. A geometric morphometric assessment of hand shape and comparison to the 2D: 4D digit ratio as a marker of sexual dimorphism. Twin Research and Human Genetics. 2013;16(2):590-600.
25. Van Lieshout RJ, Robinson M, Boyle MH. Maternal pre-pregnancy body mass index and internalizing and externalizing problems in offspring. Canadian Journal of Psychiatry. 2013;58(3):151-9.
26. Verhoeven VJ, Hysi PG, Wojciechowski R, et al. Genome-wide meta-analyses of multiancestry cohorts identify multiple new susceptibility loci for refractive error and myopia. Nat Genet. 2013 Mar;45(3):314-8.
27. Warrington NM, Wu YY, Pennell CE, Marsh JA, Beilin LJ, Palmer LJ, Lye SJ, Briollais L. Modelling BMI trajectories in children for genetic association studies. PLoS One. 2013;8(1):e53897.
28. Yazar S, Forward H, McKnight CM, Tan A, Soloshenko A, Oates SK, Ang W, Sherwin JC, Wood D, Mountain JA, Pennell CE, Hewitt AW, Mackey DA. Raine Eye Health Study: Design, Methodology and Baseline Prevalence of Ophthalmic Disease in a Birth-cohort Study of Young Adults. Ophthalmic Genet. 2013 Jan 10.
29. Yazar S, Mishra A, Ang W, Kearns L, Mountain J, Pennell CE, Montgomery G, Young T, Hammond C, Macgregor S, Mackey D, Hewitt A. Interrogation of the platelet-derived growth factor receptor alpha locus and corneal astigmatism in Australians of Northern European ancestry: Results of a genome-wide association study Mol Vis. 2013;19:1238-46.