The ADHD Brain - Science, Strategies and Stories

11/11/17 – 8:30am

Professor Wai Chen
The Neuroscience of ADHD and Medications

Summary

What neural mechanisms in the brain are implicated in ADHD? How do different medications act upon these factors to reduce symptoms? Professor Chen will provide an explanation based on neuroscience in ADHD. His presentation will provide an overview of the brain receptors and neurocircuits relevant to ADHD in everyday terms. The role of medications will be outlined. Find out how each different medication acts on the relevant receptors and neurocircuits and how dosages can be finetuned for maximum benefit.

Bio

Professor Wai CHEN, BM, MPhil(Camb), PhD, DCH, MRCP, MRCPsych, FRANZCP, Professor of Child Psychiatry at the School of Paediatrics and Child Health, University of Western Australia; Head of Service of the tier 4 statewide Complex Attention and Hyperactivity Disorders Service (CAHDS), at the Department of Health, Western Australia, and consultant child & adolescent psychiatrist.

He read medicine (BM Bachelor of Medicine) at Southampton University, then an MPhil (Master of Philosophy) degree at Corpus Christi College, Cambridge University, before completing a PhD (Doctor of Philosophy) at the Institute of Psychiatry. He received his psychiatry and child psychiatry training as a lecturer at the Maudsley Hospital and Institute of Psychiatry, Kings College London. He also gained clinical experience in adult ADHD at the National Adult ADHD Clinic (Maudsley Hospital) during my research fellowship. He is a member of the Royal College of Psychiatrists (MRCPsych, UK); a member of the Royal College of Physicians (MRCP, UK); and fellow of the Australia and New Zealand Royal College of Psychiatrists (FANZCP).

His publications include peer-reviewed research articles and book chapters. He has been awarded competitive research grants in the areas of ADHD, Recovery, Sleep Problems and neurofeedback treatment. His research is in the areas of ADHD, neurodevelopmental disorders, emotional dysregulation, their treatments, resilience, subjective well-being and social recovery in CAMHS.

His H-Index (Hirsch, 2005) compiled according to Google Scholar Citation is currently at 34 – with 25 peer-reviewed papers cited above 50 times; and 11 cited above 100 times (ranging 110 to 440).

He was jointly awarded with other co-authors a BMA Medical Book Award in 2010 for ‘Living with ADHD’.

Between 2012-2014, he also served as a Peer Reviewer for the DSM5 Clinical and Public Health Committee (CPHC) during DSM5 revision.

Professor Desiree Silva and Mr Martin Exell

Sleep problems in ADHD: Why good night sleep tight is not so easy.

Summary

Good sleep in childhood, adolescents and adulthood are important for both physical development and mental wellbeing. Chronic sleep deprivation can result in poor concentration at school, work and restless, irritable daytime behaviour. Sleep requirements alter with age and dependent on a number of factors including melatonin production. Children and adults with Attention Deficit Disorder have a high incidence of sleep problems where they may have delayed onset sleep cycle (irrespective of stimulant medication) along with a higher incidence of medical and behaviour issues that can affect sleep. Our talk will focus on case presentations, practical questions and solutions to consider when children and adults with ADHD have sleep issues.

Bio

Desiree is the professor of paediatrics at the University of Western Australia and Joondalup Health Campus. Desiree qualified as a doctor in the UK and completed her paediatric specialist training in Western Australia and Northern Territory. She has a strong interest in neurodevelopmental disorders and strong advocate for improving the lives of families with mental health conditions, having recently published the ADHD GO-TO GUIDE for parents and teachers. She is currently the project co-director for the ORIGINS study, which is a collaborative initiative to establish a new WA birth cohort at Joondalup Health Campus in partnership with the Telethon Kids Institute. Desiree is keen to promote a good work life balance and increasing contact with nature.

Mr Martin Exell is a Clinical Psychologist in private practise. Previous to this he worked in the area of child development in the state health services in Western Australia. He has worked with children, adolescents and adults with ADHD. He also has extensive experience in working in the areas of Autism spectrum Disorders, depression, anxiety, relationship problems, parenting issues, and behavioural problems. He takes a practical problem solving approach to working on issues that are challenging for people in managing their life situations.

Mr Derek Cohen

ADHD and computer addiction: what it is and how to manage

Summary

Screens are everywhere. Children today have grown up with them and they are an accepted and expected part of their lives. Internet browsing begins earlier and earlier. Increasingly, there is a push in clinical circles to include Internet Gaming Disorder as a diagnostic category. Studies do demonstrate that ADHD children especially vulnerable to the lure of screens. Is there a line we may draw that decides where use becomes abuse? What do we know about the emotional, social and cognitive effects on our children? Are there survival strategies for the children and guidelines for parents?

Bio

Derek Cohen has been working with children and families for over 30 years. He trained as a clinical psychologist in South Africa, and migrated to Australia in the mid 1980's. Initially accepting a position at the Royal Prince Alfred Hospital in Sydney, the lure of sunsets over the ocean and the best beaches in the world enticed him to Perth at the end of 1988. There followed 10 years as a senior clinical psychologist with the Health Department Child Development Clinics, a couple of years with the Autistic Association of WA, and a return to full time private practice in 1998.

Derek has been a member of the Professional Advisory Board at LADS for over 20 years. He was also a founding member of the WA Registry for Autism Spectrum Disorders in the mid 90s, which set up the diagnostic protocol that is currently in use in Western Australia, and has been the model for the rest of Australia.

In the area of ADHD, Derek has worked intensively with ADHD children and their families for 25 years. He combines in assessment and treatment a background in neuropsychology, behavioural- and developmental psychology. His treatment approach is often creative as he seeks practical strategies geared towards managing and improving a child's specific needs. He has run many workshops for LADS over the years, and is always happy to share the insights he has gained on his journey.

A/Prof David Lawrence and Benjamin Goodsell

ADHD and Education - NAPLAN results

Summary

Child and Adolescent Mental Health and Educational Outcomes

Young Minds Matter was the second Australia Child and Adolescent Survey of Mental Health and Wellbeing. It was conducted in 2013-14, with 6310 families with children and adolescents aged 4-17 taking part. Data was collected on mental health of children, covering major depressive disorder, anxiety disorders, ADHD, conduct disorder and oppositional behaviours. Over 5,000 survey participants agreed to provide access to NAPLAN records from 2008 through to 2016. On average, students with mental disorders are less connected and engaged with their schooling, attend school less often, and have poorer academic outcomes than their peers. Students with ADHD and conduct disorder had, on average, the lowest academic performance of all mental health disorders. Socio-economic factors were shown to impact negatively on academic performance, and compound with mental disorder. Academic trajectories showed that students with mental health disorders fall increasingly behind their peers, as time goes on. Several recommendations are given including: early childhood interventions, on-going management for adolescents, and improvements in service use.

Bio

David Lawrence is Principal Research Fellow in the Graduate School of Education, The University of Western Australia. He is a statistician, survey methodologist and social researcher, working in the area of child and adolescent mental health and wellbeing. He currently leads Young Minds Matter: The Second Australian Child and Adolescent Survey of Mental Health and Wellbeing. Over 6,0000 families from across Australia participated in the study, which was designed to provide up to date information on how many children and adolescents have what types of mental health problems and disorders, how these disorders impact them and their families, and the use of and need for services in the health and education sectors.

Benjamin Goodsell is currently working at the University of Western Australia in the Graduate School of Education as a Senior Research Officer. He undertakes data analysis, report writing, and other research duties for projects, primarily the Young Minds Matter record linkage projects on educational outcomes (NAPLAN), and health service and medication use (MBS/PBS). Previous roles include: working as a data analyst and research officer at the Department of Planning of Western Australia, where he undertook research in transport modelling, demographic forecasting and land-use planning; and, working as a research officer for the oil and gas and mining industries, where he undertook research in artificial light monitoring and modelling, oil spill impact and recovery prediction, and environmental surveys and risk assessments. He graduated from Curtin University with a Bachelor of Science (Multidisciplinary Science).

Professor Susan Prescott.

The Second Brain: Why our immune health and gut microbes are central to mental health

Summary

The immune system senses everything around us and within us. It learns. It remembers. When it is activated or inflamed it affects our mood, our concentration and our sense of wellness. Immune cells are present in every part body and actually comprise around 1/5 of all the cell in the brain. This means that anything that affects our immune health can affect our mental health and general wellbeing. Healthy gut bacteria are one of the most important factors for our immune health. This is why what we eat and how we interact with our environment can also affect our mood, anxiety and ADHD symptoms. It is also why gut health is a key target in improving our mental health.

Bio

Prof Susan Prescott MD, PhD, is an internationally acclaimed pediatrician and immunologist. For more than 20 years she has been publishing paradigm-shifting research, casting light on the ways in which all life experiences - including contact with microbes - resonate through the immune system, setting the stage for subsequent health or disease. Her current work focuses on the interconnections between human health and planetary health - promoting holistic value systems for both ecological and social justice – and she leads the inFLAME Global Network for planetary health. She has previously served as the Director of the World Allergy Organization. She is co-Director of the legacy ORIGINS project, which examines how the environment influences all aspects of physical and mental health throughout life. Susan is the author of more than 300 scientific papers and 4 books including *The Allergy Epidemic*, *The Calling*, *Origins* and *The Secret Life of your microbiome: Why Nature and Biodiversity are Essential to Health and Happiness*. She has received numerous prizes, awards and fellowships including a Winston Churchill Fellowship. Her inspiration to study medicine came from her grandmother, one of the few women to study medicine in the 1930s, and her love of research and academia was inspired by her grandfather Sir Stanley Prescott, former Vice-Chancellor of The University of Western Australia.

Dr Bonnie Furzer, & UWA Human Sciences Team

Exercise and the Brain

Summary

This workshop will provide an overview of the role of exercise for the developing brain including the importance of motor skill acquisition and physical competence, a key for sustainable activity from childhood into adolescence, and why this is important for children and adolescents. In addition to a discussion of the physical, social and cognitive benefits of activity, we will also focus on the role of exercise in children and adolescent mental health.

Finally, practical tips and strategies will be provided to encourage the motivation and confidence to be physically active.

Bio

This workshop has been developed (and will be presented) by a team of academics, researchers and exercise clinicians with vast experience in clinical practice and research across paediatric populations from The University of Western Australia – School of Human Sciences. Drawing on clinical experience and evidence-based practice, this team also deliver and run a variety of UWA Paediatric Exercise Programs, that provide tailored exercise to WA children and teens to promote physical and mental health and assist physical activity participation.