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Media Release

Chiefs of Staff, News Directors

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Diet and depression link is not all in the mind

New evidence of a biological link between diet and depression has come from the first study to analyse associations between diet, body mass index, inflammatory markers and mental health in adolescents.

The association between overweight/obesity and depression is known, but this new research, led by Professor Wendy Oddy from the Menzies Institute for Medical Research at the University of Tasmania and using participants from the Western Australian Pregnancy Cohort (Raine) Study*, focused on a possible biological pathway.

The study found:

- Diet and overweight/obesity are linked to inflammation and mental health problems in adolescents
- A 'healthy' dietary pattern (high in fruit, vegetables, fish and whole grains) protects against depression in adolescents through reduced body mass index and associated inflammation
- A Western dietary pattern (high intake of red meat, refined and takeaway foods, confectionary) is associated with increased depression risk in adolescents most likely through increased body mass index and underlying inflammation

Approximately 1,600 Raine Study participants were surveyed at the age of 14 years, and more than 1,000 at 17 years, for the study. Questionnaire answers on food and nutrient intake at 14 years were cross-referenced with a mental health questionnaire and clinical data on body mass index (BMI) and inflammation three years later.

People in the study were asked about their usual dietary intake in the past year and their diet was classified as either mainly 'Healthy' or 'Western'. Withdrawal, social problems, anxiety, depression and physical symptoms were assessed by mental health questionnaire.

Professor Oddy said the research indicated a complex association between dietary patterns, overweight/obesity, inflammation and mental health problems, including depressive symptoms. "Scientific work on the relationship between mental health problems and inflammation is still in its infancy, but this study makes an important contribution to mapping out how what you eat impacts on these relationships," she said.

Professor Oddy said her team of researchers is now studying specific food components and nutrients to try and understand more about the biological mechanisms leading to mental health problems and depression in adolescents and young adults.

The research has been published in *Brain Behavior and Immunity*.

Read the paper here: <https://www.ncbi.nlm.nih.gov/pubmed/29339318>

***About the Raine Study**

The Raine Study is a highly successful multi-generational longitudinal study which started in 1989. The Study has enabled many important health discoveries and informed improvements to health policy and practice. The Raine Study is supported by the University of Western Australia, Curtin University, Edith Cowan University, Murdoch University, the University of Notre Dame, Telethon Kids Institute, Women and Infants Research Foundation and the Raine Medical Research Foundation. Further details on the Raine Study are available at: www.rainestudy.org.au.

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