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'You are what you eat'. It's a saying that we've all heard time and time again. The notion that good nutrition is essential for adequate growth and sound physical wellbeing is very well established. Further, in recent years, there has been an overwhelming increase in research dedicated to better understanding how nutritional factors influence cognition and behaviour. For example, several studies have suggested that higher foetal exposure to omega-3 fatty acids and B vitamins such as folate promotes neurodevelopment. B vitamins may also play a role in neurocognitive functioning in later life, with some suggestion that lower vitamin B levels are associated with increased risk of dementia (although randomised controlled trials investigating B vitamin supplementation as a cognitive enhancer in the elderly have provided inconclusive evidence as to the benefits of such therapy for dementia). In fact, the nutritional underpinnings of Alzheimer's disease and other disorders of cognitive ageing is becoming a much researched topic. In addition, consumption of several other foods has been found to convey more acute cognitively enhancing effects. For example, ingestion of carbohydrates (e.g. glucose), caffeine, resveratrol and several 'nutraceutical' herbal extracts has been associated with short-term improvements in cognitive performance. Beyond specific micronutrients and macronutrients, the current literature seems to support anecdotal evidence that consumption of a balanced breakfast is crucial to various measures of school performance, including attention in the classroom.

What is clear from this emerging literature is that the relationship between nutritional status and neurocognitive functioning at various stages of the lifespan is complex. An aim of this Research Topic is to bring together some recent empirical findings, reviews and commentaries of the literature to date and opinion pieces relating to future directions for this burgeoning field.