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Diet and sleep

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Dietary intake is a means of providing macronutrient components, fibres, trace elements, vitamins, and phytochemicals. Diets help meet nutritional needs that enable growth and development, repair, maintenance of biochemical reactions, and in many instances prevention of diseases. Evidence shows that diets can influence sleep and mood, and be used as a natural means to promote sleep; sleep is vital for health. Well-known are soporific and sleep-calming effects of milk, mood-boosting carbohydrate-rich diets, but alerting effects of caffeine. Research also shows that diets can alter the brain and plasma levels of neurotransmitters, and serotonin is a key neurotransmitter with a sleep-inducing effect, in addition to regulating mood and satiety. Notably, the precursor of serotonin, tryptophan (TRP), is an essential amino acid which is influential in increasing brain serotonin level, and good sources of TRP can be derived from high glycemic index carbohydrate foods as well as tryptophan-containing foods. However, many protein-rich foods are not naturally abundant in TRP. Evidence of the effectiveness of dietary TRP in promoting sleep is reviewed (examples, high glycemic index rice meal, tart cherry juice beverage, de-oiled butternut squash seeds), and the link between tryptophan-rich diets and depression symptoms is discussed.

Biography

Chin-Moi Chow, Associate Professor at the University of Sydney, has a research interest that focuses on lifestyle factors (diet, exercise, thermal comfort) on sleep. She runs a sleep research laboratory at the Cumberland campus of the University at Lidcombe, and has an excellent research team that is equally focused on and interested in sleep research. She has published more than 65 articles in reputed journals.

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