Impact of vitamins & nutrients on neurological function

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Schedule of topics:

Week 1: Introduction to the brain and nutrition
The focus of the lecture will be an introduction to the brain. At the end of the lecture participants will be able to identify different structures within the brain as well as function. We will also cover the importance of nutrition. This lecture will be essential for understanding the materials covered in the rest of the course.

Week 2: Nutrition across the lifespan
An introduction to vitamins and nutrients will be covered in this lecture. Participants will also learn about the brain communicates with the gut. An overview of nutrition throughout the lifespan will also be covered. Short video clips will be used to illustrate major points.

Week 3: B-vitamins in development & aging
This lecture will cover the different B-vitamins (e.g. folic acid, vitamin B12) as well as their metabolism. After which, the role of B-vitamins in brain early development and diseases of aging will be covered. Using short films clips participants will be able to see the impact of treatment with these vitamins on disease.

Week 4: Choline, Vitamin E, and D
This lecture will extensively describe the role of choline during development and pregnancy as well as using choline as a treatment for age related cognitive decline. The metabolism of Vitamin E and D as well as their role in normal and disease neurological function will be covered. Using short films clips participants will be able to see the impact of choline deficiency and supplementation on neurological diseases.

Week 5: Impact of diets on brain function
This lecture will go over different diets and how they influence brain function. The diets reviewed include, but are not limited to the Mediterranean, Ketogenic, Atkins, and Paleo diets. Using short films clips participants will be able to see the impact of choline deficiency and supplementation on neurological diseases.

Week 6: Effect of over supplementation of vitamins and nutrients
There has been a steady increase in the amount vitamin and nutrient supplementation because of public health campaigns as well as other factors. This lecture will discuss the effects of over supplementation on neurological function. Ideas, topics and list of resources will be provided for future learning.

Recommended readings for continued learning:
Did you know? Your registration in the LinR program allows you to borrow materials from Carleton University’s MacOdrum Library. To receive a temporary borrowing card, visit the circulation desk and identify yourself as a participant of LinR.