

Food for Thought: The Relationship Between Food, Gut and Brain



Co-funded by the
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Context

- The brain is the control centre of the body, and it is heavily influenced by the food we eat. The quality and quantity of our diet can affect our cognitive abilities, mood, and overall brain function. Our brain can also impact our eating habits, by controlling our appetite, cravings, and decision-making processes.
- The gut-brain axis is a bidirectional communication system that links the gut and the brain. A diet that is high in processed foods, saturated fats, and added sugars can have negative effects on brain function and can lead to inflammation, stress, and insulin resistance, all of which can impair cognitive abilities, memory, and learning.
- Currently, the gut-brain axis has started to gain media visibility and it has come to the forefront of the medical research community.
- The growing amount of evidence that substantiates the importance of this link indicates it is a valuable area for the improvement of human well-being and more understanding and research is needed.



Solution

- To overcome the lack of knowledge in this complex relation that can affect life in many senses, EIT Food has developed this short online course to enable not only healthcare professionals, but anyone that is interested in the subject, to understand and discuss how the food we eat can optimise brain function and overall health.
- The course: "Food for Thought: Relationship Between Food, Gut and Brain. It is composed of 20 hours of learning broken down in 5 modules.
- On this course, learners will look at:
 - the relation between brain and digestive system and how they affect emotions and food intake
 - the role of psychological and neurobiological factors in food choices
 - the diet role on brain function
 - the possible causes of unhealthy and pathological eating behaviours



Ambition

- Our mission is to provide awareness about the interplay between brain, food and gut and empower individuals with the knowledge and tools to improve their overall well-being by understanding this correlation.
- We aim to provide a comprehensive understanding of the latest research and insights into the food-gut-brain connection not only for healthcare professionals, but for any individual that could be interested in how it influences physical and mental health.



High level contributors

- This course has been designed for anyone with an interest in the subject and may be of particular interest to psychologists or people working in health and well-being, and has been produced with content provided by the following institutions and it was created by University of Torino, EIT Food and the European Institute of Innovation and Technology.



A modern approach to learning

- Free learning opportunity
- Course available 24/7 to fit with busy lifestyle
- Content accessible on any connected device
- Short lesson in a variety of formats: video, text, quizzes, etc
- Conversational learning: Learners are encourage to reflect and join discussions
- Additional content added to each steps to further explore the topic



Trailer video



Course Syllabus

Week 1: Introduction

Welcome to the course
Introduction to the brain and cognition

Week 2: Responses to feeding, reward systems and food addiction

The reward system and response to feeling
Food addiction

Week 3: Cognitive and emotional influences on food behaviors

Emotions and food intake
Cognition and food intake

Week 4: Brain, mind and our diet

Food and our brain: the good...
... and the bad

Week 5: Gut-brain axis and the microbiome

Microbiome and the gut-brain axis
Microbiome and the brain

Week 1: Introduction

Welcome to the course

Introduction to the course, its structure and its content.



- 1.1** Welcome to the course VIDEO (02:05)
 - 1.2 Glossary ARTICLE
 - 1.3 What is new in this edition of the course? ARTICLE
 - 1.4 Meet the team ARTICLE
 - 1.5 Why are you here? POLL
 - 1.6** What do you know about the brain and food? QUIZ
-

Introduction to the brain and cognition

Let's explore basic information about the brain and its energy metabolism. We will also introduce some psychological topics, most notably what is meant by cognitions.



- 1.7 Introduction to the brain VIDEO (06:18)
- 1.8 What is the blood-brain barrier? ARTICLE
- 1.9 Introduction to brain metabolism VIDEO (04:47)
- 1.10 The brain as a steering centre of the body ARTICLE
- 1.11 What are cognitions? ARTICLE

The communication path between gut and brain

3 comments

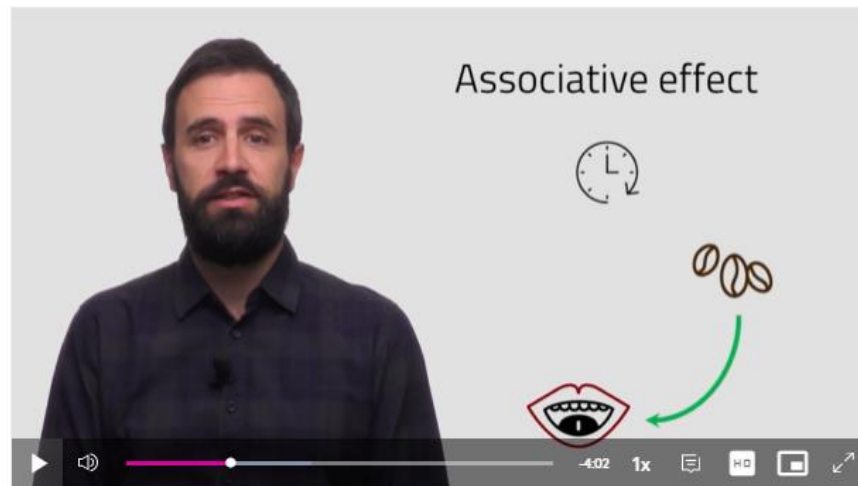
How do the gut and the brain talk with each other?

In the first week, we mentioned that the gut-brain axis is not clearly defined as the neuroendocrine axes.

Multiple communication channels link these two parts of our body. We will discuss them starting from the *vagus nerve*.

This nerve starts from the medulla oblongata, a part of the brainstem, and reaches all the major internal organs of the body: the *heart*, via the cardiac plexus; the *lungs*; via the pulmonary plexus, the *oesophagus* and continues all the way down to the colon.

The vagus nerve is part of the parasympathetic nervous system, the one associated with feeding and resting behaviour (while its



[View transcript](#)

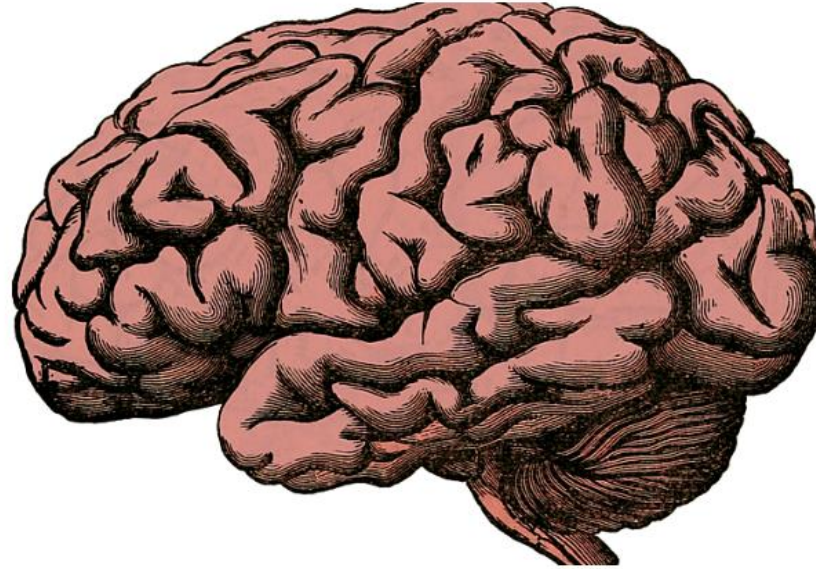
Download video: [standard](#) or [HD](#)

Caffeine: a healthy molecule?

[5 comments](#)

Can coffee, chocolate and tea improve our brain health?

Caffeine is a molecule common to these three foods - and more.



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Can the brain modify our microbiota?

1 comment

In this final week, we showed how modifying the microbiota can affect the brain.



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SHORT ONLINE COURSE

- Course available on demand
- Link:
<https://www.futurelearn.com/courses/food-for-thought>



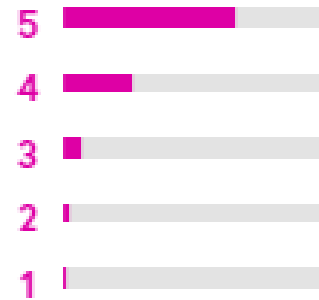
Learner reviews

Powered by 

4.5



234 Reviews





José V. Verified learner

05/08/21



Enjoy Food for Thought: The Relationship Between Food, Gut and Brain

Food for Thought: The Relationship Between Food, Gut and Brain was more than an enjoyable course. It was thoughtful, full of a great and challenging content accessible to all, lay and professional participants. As a social science professional, I would recommended it to all people interested in understanding different angles of the relationships between their gut, brain and daily food intake. You will certainly enjoy it!

[Read Less](#)



Deepa A. Verified learner

07/12/22



All topics enjoyed

Very nicely explained and really interesting content with good videos, transcripts. Precise contents with examples made topics of lectures wonderful learning. Thank you so much.





Alimentación: la relación entre la comida, el intestino y el cerebro

CURSO CORTO ONLINE

- [Version in Spanish](#) available all year round





Thank you!



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