

# Prevention C+olumn

HEALTHY EATING – MARCH 2021

## The gut, an emotional influencer!

The health of our intestines has an impact on our mental health. While you might think that information travels down from our brain to our gut, science has shown that actually many more commands are sent from our intestines to the brain.

- You co-exist with **100,000 billion micro-organisms** that inhabit your intestines.
- Your diet influences the chemistry of your brain, and therefore, your mental health. This new field of study is called **neuro-nutrition**.

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# The intestines: a “brain” that directs and digests



We know that emotions have an impact on what happens in the intestines. Who hasn't experienced abdominal cramps or diarrhea in times of stress? The human intestines are more than just a tube for digesting and absorbing nutrients. They contain hundreds of **millions of neurons** that are communicating every second with the central nervous system.

They are also home to more than **100,000 billion micro-organisms** (bacteria, viruses, yeasts). Yes, you are hosting a lot of guests! This little ecosystem in your gut is called the **intestinal microbiota** and its influence on your health, physical as well as mental, is such that we call it your second brain.

Your intestines and the families of bacteria that live there synthesize many beneficial nutrients, including...

- B-complex vitamins that contribute to producing neurotransmitters
- Short-chain fatty acids with anti-inflammatory properties that can reduce depression symptoms

**Plus, a robust, diverse microbiota prevents harmful micro-organisms from moving in. One more reason to look after it's health! ■**

## A well-nourished brain

More than ever before, prevention is a priority when it comes to mental health. Even if mental health issues are better understood today, symptoms of anxiety and depression are increasing in Canada.

Currently, not many professionals include nutrition as one of the therapies they offer. However, neurotransmitters for managing stress and generating a feeling of well-being are produced from dietary components. To function effectively, the brain needs dependable communication tools. A winning strategy is built on including proteins in every meal and a wide variety of vegetables, which have lots of vitamins and minerals. These are key ingredients for producing the neurotransmitters needed to manage emotions:

- Serotonin, associated with well-being
- Dopamine, which regulates moods
- Noradrenaline, which influences wakefulness and energy levels

A healthy diet can prevent or reduce symptoms of anxiety and depression, as well as sleep, memory and learning disorders.

We are learning more and more from science about the role of diet in the occurrence of mental health issues. This field of study is called **neuro-nutrition**. ■



## It goes both ways!

Dietary choices influence a person's mental state, but the opposite is true as well! A person experiencing depression may prefer processed foods that can be quickly prepared, but are often less nutritional and contain more sugar and fat. Fatigue and lack of motivation explain these choices, which exacerbate the problem. A bad diet leads to a lack of energy and doesn't provide the necessary nutrients for the synthesis of neurotransmitters related to well-being.

Your moods regulate the quantity and quality of what you eat, which influences the chemistry of your brain. ■

## THE MICROBIOTA under investigation!

Over the last years, studies of the microbiota and mental health have proliferated, with surprising results. For instance, when researchers transplanted the microbiota of an anxious mouse to mice whose intestines didn't have a microbiota, these mice became anxious as well. A similar reaction was observed between an adventurous mouse and a passive mouse.

In a 2016 study, the transfer of microbiota from a person experiencing depression to a healthy rat even caused the rodent to display depressive behaviour. Therefore, it is possible there is a link between the presence or absence of certain families of bacteria in the intestines and various mental health issues such as anxiety, depression, eating disorders, etc. Mental health researchers are keenly interested in these results, which have been repeated in many studies. ■

## In conclusion

Your intestines and their well-populated microbiota have an intimate relationship with your brain. Your dietary choices can therefore influence your moods, and vice versa. Opting for and maintaining a balanced diet is a good way to sustain your physical—and mental—health! ■

## Nourish your microbiota

Since food quality influences the intestinal microbiota and how the brain functions, it's best to feed it well. This involves three key aspects:

### 1. COUNT ON FIBRE

**Eat lots of vegetables, fruits, legumes, whole grains and nuts every day.**

Nothing is better than fibre for nourishing the families of good intestinal bacteria. These bacteria reduce inflammation, which can foster depression.

### 2. ADD COLOUR TO YOUR DISHES

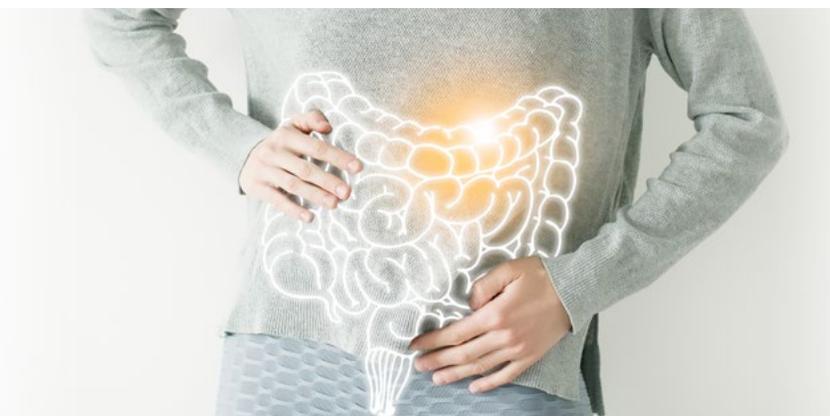
**Target a variety of vegetables and fruits to include more colours: red, purple, green, yellow, orange...**

The pigments in vegetables and fruits correspond to various types of antioxidants. Antioxidants protect the quality of the fats making up the brain. In addition, colourful vegetables contain lots of the vitamins and minerals needed to make neurotransmitters.

### 3. MAKE PROTEINS A PART OF EVERY MEAL

**Favour vegetable-based proteins such as legumes, tofu, soya beans, tempeh, nuts and grains and cut down on processed and red meats.**

Eating proteins at every meal contributes to maintaining your energy and providing the materials necessary for the production of neurotransmitters and white blood cells, the "soldiers" of the immune system. The ideal solution? Eat reasonable portions and don't always pick the same foods. ■



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