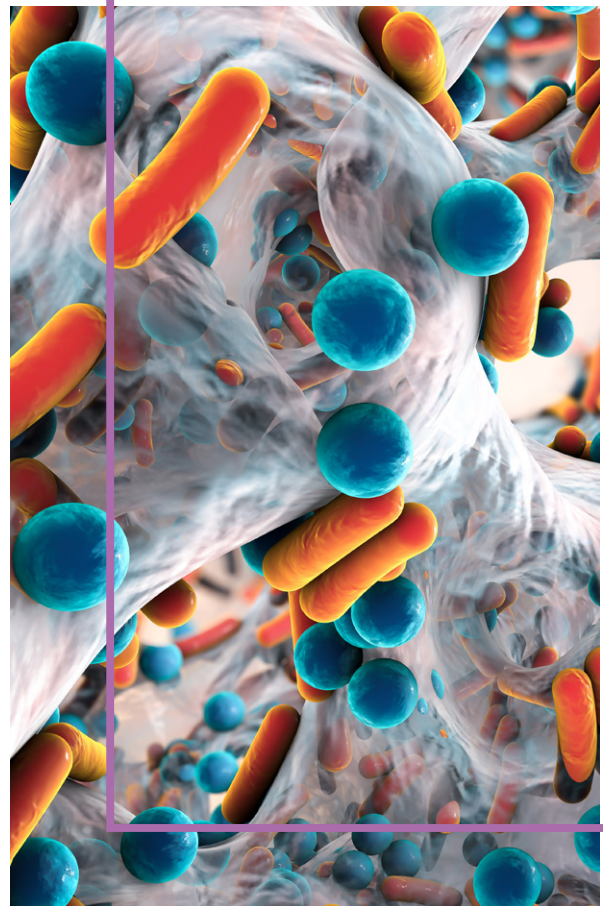


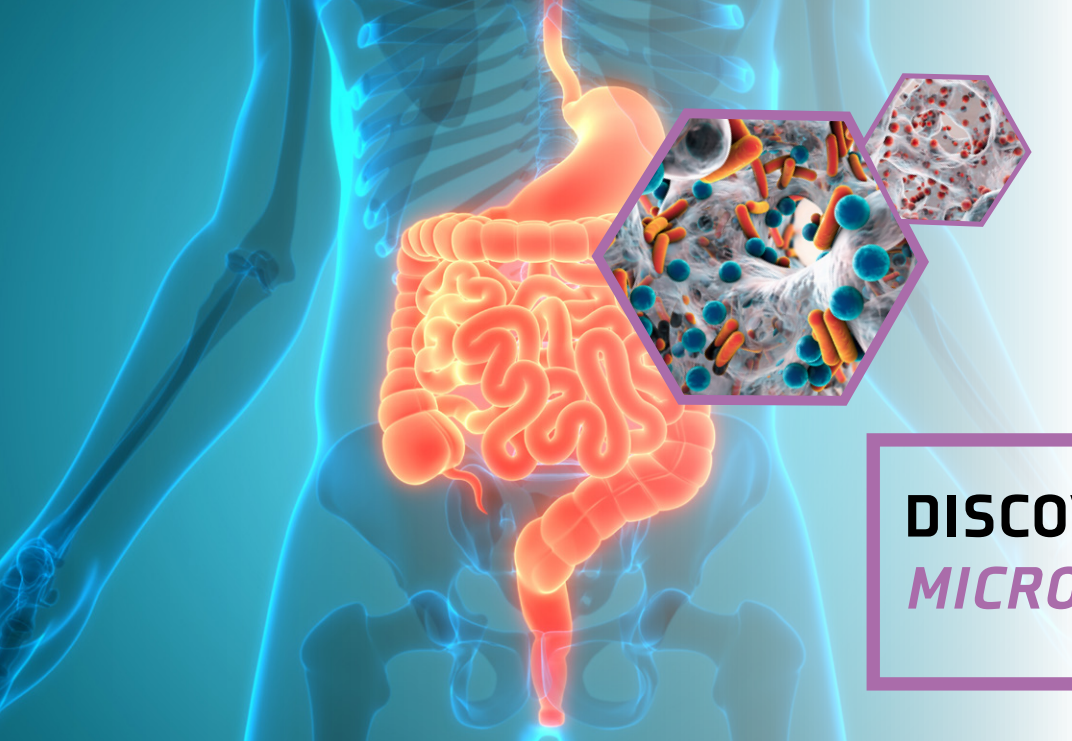
# MODIFICATION OF THE *MICROBIOTA*

AFTER *ACUPRESSURE* MASSAGE

The microbiota is made up of all the cells, organisms and bacteria living in our intestinal tract, which perform all the vital functions of **absorption, digestion and excretion** of nutrients. We are talking about more than 100 billion micro-organisms (far more complex than our 23,000 pairs of genes) combined in a certain proportion, which depend on each other in order to maintain a certain ecological balance.

It is therefore a dense, dynamic and versatile **incredibly complex system to decipher**. The PUBMED database is full of tens of thousands of articles on the microbiota. Those numerous published studies show that the microbiota does not just have a role in the digestion of food but that its impact on health and well-being is essential. The microbiota is **inextricably linked to our immunity**, with a growing number of research agreeing that 70% of our immune system is found in the intestine as well as 80% of the cells responsible for antibody production.





## DISCOVERING *MICROBIOTA...*

The intestinal microbiota is the crucial barrier between our body and the outside world (substances/food, bacteria, viruses, etc.) which determines what is and what is not allowed in our body. **To get a strong and protective intestinal wall, the microbiota must be provided with what it needs to thrive.** That prevents the 'bad' bacteria from getting out of control and overwhelming the 'good' bacteria, resulting in a 'leaky' bowel and vulnerability to inflammation.

**The relationship between intestinal health and immunity is huge, and far too many people ignore it: they have digestive problems, they feel bloated, and think it's normal because everyone has those problems.**

The balance and the composition of the microbiota will be impacted throughout our life by various intrinsic factors. (age, infections, hormones ...) or environmental factors (food, antibiotics ...). **That balance is essential to the many functions it performs,** and its disturbance, also known as dysbiosis,

is increasingly described as being associated with the development or aggravation of certain pathologies : chronic inflammatory bowel diseases, obesity, colorectal cancer, psychiatric pathologies linked to stress.

The scientific community shows a real enthusiasm for the various ways of modulating microbiota, which could be offered either as a preventive measure or as a therapeutic option aiming at restoring intestinal balance, thus fighting against pathologies associated with dysbiosis.

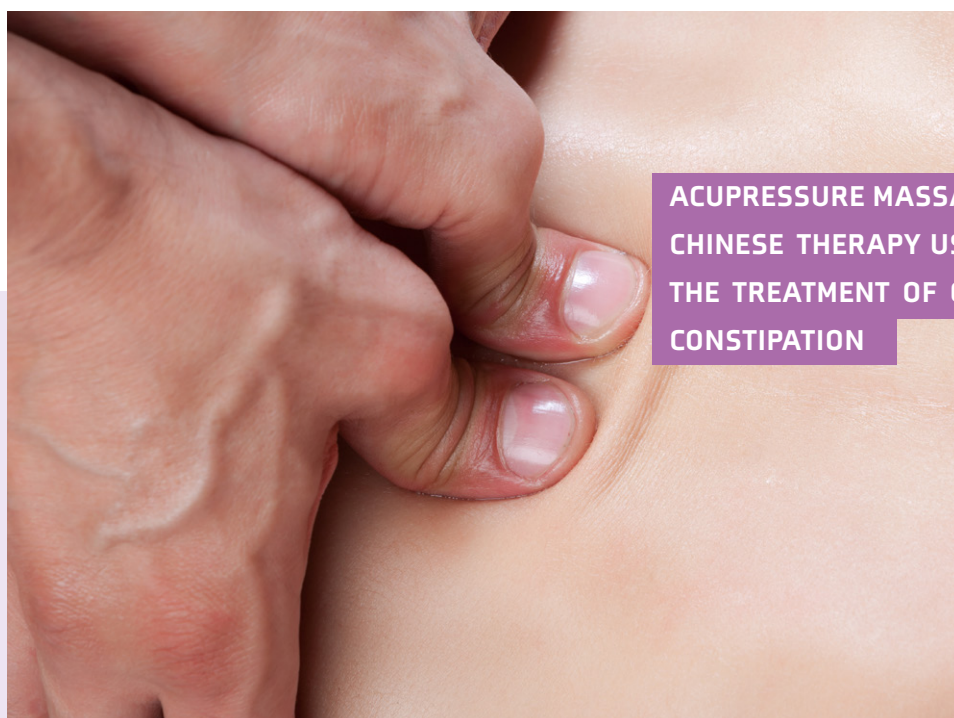
In that context, a Chinese team from Fuzhou evaluated the effect of **acupressure massage** on the microbiota composition of patients with **Chronic Functional Constipation (CFC)**. Acupressure massage is a traditional Chinese therapy used successfully in the treatment of CFC. That disease is often accompanied by an imbalance of the intestinal microbiota with many negative effects on the human body, such as production of numerous intestinal toxins,

inducing colon cancer, accelerating ageing and promoting various intestinal diseases.

That imbalance is mainly manifested by a decrease in certain anaerobic bacteria, such as *Lactobacillus*, *Bifidobacterium* and *Bacteroides*, and an increase in pathogenic bacteria, such as *Pseudomonas aeruginosa*, *Campylobacter jejuni* and *Clostridium putrefaciens*.

Chinese researchers included 104 patients with CFC, 49 men and 55 women with respectively an average age of 49 and 52 years old and an average disease duration of 9 months.

Those patients were divided into 2 groups: an experimental group treated with massage and an untreated control group. Various assessments - including DNA sequencing - were performed one week BEFORE and 2 weeks AFTER the 12-week therapy.



In that study, a sequencing platform was used to analyze the structure of all genes in the intestinal microbiota. In addition to an improvement in functional criteria in the treatment group, **results show that the composition of the intestinal microbiota is quite different between the treated and the control group**, indicating a relationship between massage treatment and the intestinal microbiota. The authors have concluded that **acupressure massage changes the composition of the intestinal microbiota**. Further studies are needed to confirm those results in order to elucidate the underlying mechanism. That study was published in January 2021 in the journal "Evidence-Based Complementary and Alternative Medicine".

## **SOURCES :**

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