

Nutrition an important factor in irritable bowel syndrome

## NUTRI-lipidomics

Molecular nutrition and healthy diet



### The irritable bowel syndrome: main features

The irritable colon (IBS acronym from Irritable Bowel Syndrome) concerns disorders characterized by alteration of the function of the digestive tract accompanied by pain, abdominal swelling and alteration of defecation. These disorders are extremely widespread, so much so that they concern between 10 and 20% of the population in Western countries, with a marked prevalence in women.

There are many mechanisms that can underlie this problem but there are some more than others that can be linked to nutrition. Let's not forget that every day about 2 kg of food is ingested. Among these IBS trigger factors we highlight the following:

- alterations of the intestinal microbiota ([linkare la frase cc](#))
- alterations in intestinal permeability
- low-grade inflammation

### The role of nutrition...

This reality is well known to nutrition professionals because IBS patients very often report suffering more intensely when eating certain types of foods. Food components that increase intestinal symptoms include insoluble fibers that are among the oligo-, di-, mono-saccharides and fermentable polyols called FODMAPs. The diet with low presence of FODMAPs is effective in reducing and treating IBS symptoms.



There are also subjects with IBS symptoms who, despite being negative for celiac disease, benefit from a gluten-free diet. These patients fall into a problem called non-celiac gluten sensitivity (NCGS) and that is treated with a [gluten-free diet](#).

### ...and fatty acids

Low-grade inflammation, both mucosal and systemic, is found in some patients with IBS. This condition is highlighted in the intestine by lymphocyte activation and immunity mediators, while in circulation by the presence of pro-inflammatory cytokines. Speaking of inflammation, polyunsaturated fatty acids (PUFAs) enter the scene, from which the molecules that induce or resolve inflammation start. Since the presence of omega-6 and omega-3 PUFAs in humans is ensured by dietary sources, the central role of diet in balancing the pro and anti-inflammatory processes is evident. Some authors, for example, have found a greater presence of arachidonic acid (omega-6, pro-inflammatory) and inflammatory cytokines in the plasma of a population of female patients with IBS (3).

## An integrated approach

From a recent study conducted by the American College of Gastroenterology, it emerges that patients suffer from IBS feel unsatisfied with the low level of effectiveness of the treatments received or frustrated by the effects of the therapies. Waiting for the scientific world to find new treatments for these disorders, it makes sense setting up a nutritional approach that considers the critical points highlighted. The main elements to keep in mind in the dietary approach are:

- the well-being of the intestinal ecosystem and its epithelium with the most appropriate plant fibers, lipids, antioxidants;
- the balance of PUFA fatty acids, individually evaluated to ensure that the omega-3 and 6 metabolic pathways work in an anti-inflammatory way

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### Bibliography:

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*The diet advice, written in the article, are not intended to be a substitute for a personal nutrition plan and should be adapted to specific cases*

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