

## DR.FRANCESCO LAGANA'



### DYSBIOSIS AND HYDROCOLON THERAPY:

#### FROM THE PROBLEM TO ITS NATURAL SOLUTION

The alteration of the intestinal flora is the cause of an inflammatory disease which, from intestinal, may become systemic involving organs and systems. The balance that adjusts the wellbeing of the whole organism is seriously compromised resulting in a deterioration in the quality of life.

But if the problem begins from the intestine, we can start again from the guts to find the solution: water, the most simple and natural element found in nature, when used correctly, is able to re-establish the balance of the intestinal flora restoring the normal integrity and intestinal functionality. "Intestinal dysbiosis" or "intestinal dysmicrobism" is a condition characterised by an imbalance of the enteric intestinal flora.

**The intestinal flora is formed of a group of bacteria which, living together in a certain balance contribute to overall good health.**

The state of equilibrium between the different strains of bacteria is called eubiosis. If instead fungi or other germs that may cause illnesses prevail, it is said that the intestine is in a state of dysbiosis. Practically, the beneficial bacterial flora acts as a defensive barrier, creating an inhospitable environment to pathogens, by modifying the intestinal pH and rendering the target cells useless due to its presence upon them.

Therefore the presence of these beneficial "microbes" in human intestines is not accidental, but responds to very specific needs. It is estimated that there could be about 400-500 different species that establish a balance which are able to promote the absorption of nutrients derived from food, and increase the resistance to diseases. The intestinal flora is the real vital driving force of the intestine, whose efficiency has always been considered the foundation of overall health of the human organism in naturopathy.

**The causes.** Among the causes of intestinal dysbiosis there are diet, the use of drugs, infrequent bowel regularity, stress, an incorrect diet rich in processed foods containing additives, dyes, preservatives and foreign chemicals, insalubrious water and air.

**The effects.** The alteration of bacterial flora means that bacteria with beneficial action reduce and the harmful ones increase. This situation makes the complete processing of faecal material impossible, therefore generating abnormal fermentation and putrefaction which, in addition to varying the temperature of the guts, inflames the mucous membrane and then poisons the intestine followed by the whole body and considerably reduces the immune defences.

**Gut permeability.** Many studies regarding gastric-intestinal permeability show that it is strictly dependent on the intestinal bacteria. The intestine with impaired bacterial flora, which in turn compromises the production of digestive enzymes, losing the regular biochemical conditions, relating to pH, vitamins, peptides and bacteria, generates minimal secondary sub-mucous inflammation, so much so as to alter some enzymatic patterns present on the cell membranes, especially on the microvilli.

Under normal conditions the microvilli allow the physiological digestion and absorption of micronutrients, while in abnormal conditions it determines the passage of macro-molecules over the gastrointestinal barrier, which due to their size can be identified as non-self and resulting as immunogenic can trigger an immune response. The gastrointestinal epithelium is normally a selectively permeable barrier and its function is determined by the formation of protein-protein complexes that are able "to seal" the intercellular space.

These changes determine the disruption of the gastrointestinal barrier function which helps to promote immunological reactions (autoimmune and inflammatory diseases).



External agents, which act as chemical and/or biological pollutants, that alter the intestinal flora and interact with the protein matrix of the joints, change the conformation and then continually increase the permeability of the external agents causing the so-called intestinal permeability syndrome (leaky gut syndrome) leading to significant clinical signs or symptoms.

Once in the blood, these substances still need to be eliminated or they may overload the liver, and this can lead to various ailments caused by an overload of toxins:

- tiredness
- cephalaea
- mental confusion
- rheumatic and arthritic forms (can be favoured and made worse by the presence of these substances in the blood which, when not properly removed by the liver, settle in the tissues and in the joints, causing inflammation and pain)
- recurrent cystitis and vaginal candidiasis (in addition to the substances carried by the bloodstream, when the intestinal mucosa has become porous, there is a transmission of substances to the neighbouring zones even if only by direct contact and this is one of the reasons why we have very frequent urinary tract infections and vaginitis)
- psoriasis
- atopic dermatitis
- skin disorders (eczema, dermatitis)
- fibromyalgia

Another "side effect" of the introduction in the blood of these substances is a super activation of the immune system, which can lead to forms of:

- **food intolerance**
- **allergies**
- breathing problems
- autoimmune diseases

**Celiac disease and gluten sensitivity.** The great distinctiveness of celiac disease is undoubtedly the environmental factor that causes it: gliadin. This is an immunogenic peptide, resistant to pancreatic, enzymatic and gastric digestion, which thanks to the changes of the tight junctions is able to find a passage in order to get to the lamina propria (part of the intestinal mucosa), where the immune reaction happens. Lesions of the intestinal mucosa (villous atrophy and hyperplasia of the crypts), detectable via a biopsy, are the result of this dynamic immunological process that can be modulated in time.

Gluten Sensitivity, however, is not a subdued form of celiac disease, but a disease in its own right. Even if it is different from the molecular and immune point of view, however, it might present the same trigger, namely the opening of the tight junctions. Gluten Sensitivity (GS) does not present abnormal changes in intestinal permeability, it only shows submucosal phlogosis, which is instead significantly higher in celiac disease. To date there are no laboratory or histological tests able to confirm this type of "responsiveness", therefore it is a diagnosis of exclusion; after the diagnosis gluten is eliminated from the diet and an open challenge follows (a supervised reintroduction of food containing gluten), to assess if there is an effective improvement of the symptoms following the reduction or elimination of gluten from the diet and a reappearance of the ailments after having reintroduced this food protein.

Lactase is the enzyme produced in the intestinal microvilli and it is needed in order to digest lactose, that is, to separate glucose and galactose, which is what happens in subjects with lactase persistence, meaning that even as adults they tolerate the lactose because they continue to produce the lactase. In these subjects the LCT gene (chromosome 2) that produces the lactase doesn't subside after weaning, as occurs in those who are lactose intolerant. Because lactase is

produced at the level of the microvilli, any problems with the microvilli, as can be caused by celiac disease, can result in failure to produce lactase and therefore a false lactose intolerance.

Generally, porous bowel syndrome can be attributed to symptoms such as **depression**, anxiety, **hyperactivity** syndrome, **joint** and **muscle pain**, headaches, chronic tiredness, intestinal problems (**irritable bowel**, **constipation** or **diarrhoea**) and abnormal **thyroid changes (hypothyroidism)**.

**Hydrocolon therapy.** The most delicate and effective method used since ancient times to clean the intestine and restore the eubiosis is definitely washing with water. The purifying power of the water has always been used for healing purposes. In naturopathy the properties of water are also used to cleanse the colon, to be precise hydrocolonotherapy, a gentle and beneficial intestinal cleansing that aims to eliminate waste and toxins: it helps detoxify, deflate the stomach, combat intestinal disorders and solve many health issues, even those not directly connected to the colon. Without pain and without resorting to drugs: hydrocolon therapy is a natural remedy based on colon cleansing.

More precisely hydrocolon therapy is a cleansing of the large intestine (the last tract of the intestine, also called the colon) through water being introduced into the rectum via a probe that is inserted gently and painlessly.

The function of the liquid is to make the faeces fluid, to melt encrusted waste that lines the walls of the intestine, promoting the expulsion of waste substances. The liquid injected during an intestinal cleansing is added to the volume of the faeces and exerts pressure on the intestinal musculature intensely stimulating the peristalsis and the defecation reflexes. The rapid evacuation of a large volume of material (water and waste) also causes a suction effect on the waste material that is located further upstream: if the intestinal cleansing is well executed the inner colon is purified from the beginning (cecum or blind) to the final section.

The benefits of hydrocolon therapy are so many and we may already experience them after several cleansings. The outpatient hydrocolon therapy is executed with special equipment connected to two tubes, which are in turn connected to a cannula.

After the person has been made to lie down on the examination bed, covered with a cloth, the therapist will rectally insert a two-way disposable probe through which the water flows. Reversing the flow, the water is discharged with the intestinal content. All of this occurs in a closed and hygienic system.

The cannula, lubricated in advance, is inserted about 5-6 centimetres into the anus. Through the first tube some purified water is introduced into the colon while, through the second, the water is later discharged together with the faecal material. The procedure is repeated several times until the out-coming water appears clean. It does not mean however that if the water comes out clear, the colon has been completely cleaned. If there is contraction or if there is very hardened waste, the water may flow out clear despite waste and toxins being present in the colon. The cleansing always takes place under the supervision of a specialist who, during the treatment, exercises an abdominal massage, this also being fundamental for the success of the treatment.

The benefits of hydrocolon therapy are:

- General **detoxification of the organism** with **deep cleansing**.

- Feeling of **well-being**: elimination of mucus, intestinal gas, toxins, undigested food particles.
- Feeling of **lightness**: the pressure on neighbouring organs disappears.
- Improvement in intestinal disorders: **constipation**, **colitis**, **dysbiosis** (alteration of the bacterial flora), **irritable bowel** syndrome, **haemorrhoids**, **meteorism** (abdominal bloating), diarrhoea.
- Increased **abdominal tone** and of the **peristalsis**: if the intestine is very blocked there may not be a good peristalsis.
- Disappearance of typical **skin impurities** such as **pimples**, **blackheads**, papules, pustules, **acne**, **eczema**, **dermatitis**.
- Gynaecological diseases considerably benefit from it: for example **vaginitis** and **leucorrhoea**.
- **Candida**, or better **candidiasis** (candida infection) finds great relief through hydrocolon therapy.
- Urological diseases improve: **cystitis** and **urinary tract inflammation**.
- **Faster digestion** and attenuation of **bad breath (halitosis)** and of **feeling sleepy** after eating.
- **Better liver function**, as the toxins hamper its proper functioning.
- **Elimination of toxic substances** in the blood.
- Improvement in **chronic arthropathy** and of osteoarticular diseases such as **rheumatism** and **arthrosis**.
- Great benefit for **asthma** and **allergies**.
- **Improved memory and reflexes**, more **mental clarity**.
- **More** intestinal **absorption** ability.
- **Reduced desire to eat sugar** and carbohydrates.
- Easier **weight loss**.
- **Menstrual cycle** is less painful.
- Improvement in **muscle tone of the colon**.
- **Disappearance** of disorders relating to **colitis**, **irritable bowel** syndrome and other gastrointestinal problems.
- **Reduction of excess weight** and the regaining of a **flat stomach**.
- The **skin** becomes **bright**, fresh and **ages more slowly**.
- **Anti-cellulite** action for a draining and detoxifying effect.
- Stimulation of the body's **immune defences**.
- It forms an excellent ground for implanting **bacterial flora**.
- **Disappearance of parasites** and **intestinal worms**.
- Great **anti-ageing** therapy of the body.
- Improvement of **intellectual function** and **emotional re-balancing** with lucidity and lightness: together with the intestinal toxins the mental ones are expelled too.
- Improvement of **edema** and **inflammatory conditions** (elimination of irritant substances).
- Benefits for **cellulite**.
- **Re-balancing in weight for the thin people**.
- Relief from **chronic fatigue**.
- Useful from the point of view of **prevention**: avoids the appearance or the becoming chronic of some bowel disorders.
- General **painful symptoms**, easing discomfort of said symptoms: for example headaches (cephalea) benefit very much from the hydro colon therapy.

- Strengthened **immune system**.
- Pathologies of the prostate (**prostatic hypertrophy** or **prostatitis**) benefit considerably from it.
- It relieves the **overload of toxic substances** such as environmental pollutants, chemotherapeutic drugs, or over-eating.

The major indications for hydrocolon therapy are:

#### **Intestinal diseases**

- Constipation
- Diarrhoea
- Meteorism and bloating
- Colitis and irritable bowel syndrome
- Parasitic infections
- Atonic colon
- Haemorrhoids (1st and 2nd degree)
- Intestinal toxaemia
- Intestinal putrefaction
- Intestinal candidiasis
- Prevention of intestinal tumours

#### **Digestive and hepatic disorders**

- Slow digestion
- Halitosis
- Food poisoning
- Hepatic insufficiency and disease

#### **Female uro-genital disorders**

- Menstrual pain (dysmenorrhoea)
- Pre-menstrual syndrome
- Vaginitis
- Leucorrhoea
- Vaginal candidiasis
- Menopausal disorders

#### **Skin pathologies**

- Skin problems in general
- Pimples and boils
- Acne
- Eczema
- Dermatitis
- Eczema

#### **Disorders in the joints**

- Arthropathy

- Rheumatism

### **Respiratory and auricle system disorders**

- Chronic earache
- Sinusitis and chronic colds
- Recurring coughs
- Asthma

### **Other disorders**

- Chronic tiredness and weariness (asthenia)
- Candidiasis of every kind
- Cellulite
- Prostatitis and prostatic hypertrophy
- Being overweight
- Ageing
- Circulatory disorders
- Allergies of unidentified origin
- Fever
- Organic poisoning
- Alcohol, medicine or drugs poisoning
- Inflammation
- Painful symptomatology
- Cephalgia (migraine)

### **Contraindications to hydrocolon therapy are:**

- Severe uncontrolled heart disease
- Hypertension and congestive cardiopathy
- Aneurysms
- Severe anaemia
- Perforations - bleeding of the intestinal tract
- Haemorrhoids of severe degree
- Cirrhosis
- Carcinoma of the colon or the rectum
- Advanced stages of pregnancy
- Abdominal hernias
- Recent surgery of the colon-rectal tract
- Severe renal insufficiency
- Severe anal fistulae
- Disorders in the bleeding phase, i.e. if we have blood loss in the faeces, for example with Crohn's disease in the acute phase.

## **CURRICULUM VITAE DR. FRANCESCO LAGANA'**

Having obtained a degree in medicine and surgery in 1991 at the University of Messina, in 1992 he then attended a specialisation course in tropical Dermatology and in 2000 a specialisation course in Infectious Diseases at the University of Messina.

From 1992 to 1995 he was a medical officer with the assignment of Managing Director of the Medical Service at Cerimant in Nuoro. He then worked as a doctor in the Accident and Emergency department at the St. Anna Clinic in Brescia and at the St. Marco General Hospital in Zingonia (BG). He then went on to become a fixed term Medical Director in the Infectious Diseases Operational Unit at the University Hospital of Messina.

From 2000 he has been in charge of the Welfare Continuity Service (ASST) of Bergamo and since 2008 he is also Medical Director for the Aleman of Alzano Lombardo (BG) Medical Health Centre where he also practices as a freelancer in Aesthetics Medicine, Laser Therapy and Hydrocolon therapy.

Among his hobbies: theoretical and practical knowledge of guitar and piano.