

# Nutritional Biotherapy

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## Introduction

The ability of food to bring health or illness was already known since ancient times. In the 4th century BC Hippocrates said that food would be our medicine. Even most of the precepts of the Salerno medical school consisted of dietary suggestions. However, it has only been for a few decades that science has been tackling the study of nutrition in an ever more profound manner. The proliferation of many studies is offering us an increasingly broader image of the therapeutic capabilities of individual foods and therefore of the importance of nutrition on the balance of the state of health or disease. All this research offers us a much broader picture of nutrition, which is no longer seen in exclusively quantitative terms, with the measurement of the major nutrients or calories, which must satisfy our energy needs, but with the ability to influence everything metabolism and therefore on the causes of disease themselves. The increase in knowledge in the various branches of medicine and biochemistry is offering us a new image of food. We are moving from a macroscopic and in some ways coarse image to a more refined vision, in which molecules sometimes present in extremely low quantities play a role of primary importance, such as trace minerals, for example chromium, selenium, or the enormous quantities of phytochemicals, of which more and more therapeutic potential is being discovered every day. The view of vitamins themselves has changed today. The recognition of their importance remains unchanged, however for a vitamin to fully express its metabolic virtues it is important that it is accompanied by other substances, cofactors, which significantly amplify its benefits, therefore allowing its use at low doses, such as those present in nature. Following such a flurry of research on the therapeutic possibilities of foods, multiple branches have arisen that study in various ways the intervention of food on the maintenance or recovery of health. All these methods, which belong to the large sector of nutritional therapies, differ from each other due to sometimes insignificant details.

## Nutritional Therapy

This name defines the method that consists in using foods and only foods for therapeutic purposes as if they were medicines, taking into account the biochemical contribution and the active ingredients contained therein, the cofactors that allow their use, of the interaction in the combination of the foods themselves within the same meal and finally of the direct action of the food on the individual organs and systems of the body. An important prerequisite is that the diagnosis is made correctly and therefore the association of foods is equally correct.

### From what has been stated, two assumptions are evident:

A. one must have a very fine knowledge of the composition of foods. It is important to know the composition of the food when it is raw, but also all the alterations it undergoes after cooking and different types of cooking. We also need to know what happens to a food when it is cooked or combined with another during the meal. Antagonisms or synergisms between nutrients can develop. Some foods that are particularly useful for the functions of an organ, when cooked, can become harmful. Let's take an example. It is common to think that egg, especially the yolk, is bad for a troubled liver. Such an opinion is only partly true. The

raw egg, in particular the yolk, has a positive trophic action on the hepatocyte. The problems arise when the egg, especially the yolk, is cooked, and they become worse as cooking continues. Liver activity is more affected by proteins and fats denatured by cooking.

B. It is necessary to know well the physiological and metabolic processes that underlie the various disorders, in such a way as to give the body the suitable substances present in the food, even in minimal quantities, just as if it were a drug. Furthermore, it is very important that the evolution of the disease is monitored over time to ensure that the drug-food adapts to changes in the clinical picture.

2.2. The practice of nutritional biotherapy must take into account some very precise laws:

a) Every living organism is pervaded by an energy that naturally maintains or recovers the state of well-being when there is no other element that stands in the way. From this assumption it follows that in every disorder if we were able to identify and eliminate the cause that determined it, naturally the body or organ would recover a full state of health. From this perspective, nutritional biotherapy deals not only with the prescription of adequate foods, but also suggests foods to avoid, precisely because certain foods in particular circumstances and for that person could represent an obstacle to recovery.

b) In every living organism, from the lowest on the biological scale, up to man, function is the most important driving force behind the structuring of an organ. An organ deprived of its function undergoes atrophy. In such circumstances, nutritional biotherapy with the administration of specific foods will give the organ the necessary stimulus to slowly recover its function. Some people have disorders caused by reduced liver function, such as..... these symptoms will reduce and disappear with adequate stimulation of liver function, always implemented with appropriate foods. The same thing happens with gastric digestive function. people tend to increasingly eliminate foods that they cannot digest, this practice will further aggravate digestive difficulties. On the contrary, that particular food will be consumed frequently even if in minimal doses.

c) The Arndt-Shulz law states that every biologically active substance introduced into the body has an effect on the functions

by virtue of the doses. At low doses it stimulates function, at high doses it inhibits it, at very high doses it is toxic. The same effects have the thousands of molecules present in foods. An example for everyone: we frequently find it written that eating excessive quantities of cruciferous vegetables can create problems with thyroid function, inhibiting it. However the same function can be excited by small quantities of cruciferous vegetables.

Only a few decades ago, these concepts were recognized and carried forward only by non-conventional medicines or naturopathy studies. For several years now, important university research centers scattered throughout the world have been dealing with nutrition. Important American university centers such as the Mayo Clinic and Harvard conduct research on the effects of nutrition on the onset of chronic degenerative diseases and on their recovery. Not a day goes by without hearing news about the medicinal effects of a natural molecule present in some food. The medicinal virtues of cruciferous vegetables have long been known. Molecules with almost unpronounceable names such as dithiolthiones, glucosinolates, isothiocyanates, indoles and many others, present in cabbage, broccoli and cabbage, are today considered among the most powerful anti-carcinogens and detoxifiers from toxic compounds and heavy metals introduced from the outside.

In some cases we may be faced with a pathological process for which the active ingredients present in the food are not sufficient to cure. In such cases we will add food supplements to the prescribed diet, which in many cases maintain the characteristics of natural foods as they are little modified and therefore they can be included in all respects among the foods that can be recommended both to healthy subjects, to prevent any deficiencies, and to subjects who find themselves in particular conditions of micronutrient deficiency. As research progresses, we are witnessing a phenomenon in science that we could define as a confluence between the various branches of knowledge. The same thing goes for nutrition. Until a few decades ago, we proceeded more through rumors and myths than through proven knowledge. Today, research on foods or on the molecules present in them is conducted in the same way as pharmaceutical products are studied, in the same laboratories and with the same scientific procedures. Nutritional BioTherapy has become a crossroads of knowledge that derives from other branches such as nutritional genetics, nutraceuticals and many others that have human health as their goal.