



## Functional Dysfunction is a Mysterious and Beautiful Stranger

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Functional disorders are based on changes in the regulatory mechanisms that control the vital activity of organs, especially the gastrointestinal tract. The purpose of our research was to study changes in physiologically active compounds (PhAC), which are constantly present in the body, but from their concentration and moment depends on the state of the functional state of the cell, tissue, organ. The main regulatory neurotransmitter is acetylcholine (Ach), a neurotransmitter in the system of transmission of nerve impulses to the target cell, which interacts with Ach via a receptor and responds by changing its functions. In the body, there are strict mechanisms for regulating the concentration PhAC, physiologically active compounds. This mechanism is based on enzyme/substrate relationships (Figure 2) PhAC, with degrading enzymes PhAC. This mechanism is able to keep the concentration PhAC, at a constant level, regardless of exo- and endo-influences; it was formed long ago, is unique and absolutely conservative. It is believed that at birth each person receives an individual microflora and spectrum PhAC. These features of our inner world predetermine the individual development of certain functional diseases. Material and methods. In the blood serum, the concentration of Ach was determined in patients with gastritis, duodenitis, IBS, and CP, who were hospitalized at the Central Research Institute of Gas-

troenterology. As a result, according to the level of Ax concentration, the patients were divided into three groups: 1. "high", over 1.5 mmol/l, the frequency of occurrence is 20%; 2. "average" from 1.02 to 1.5 mmol/l, 60%; 3. "low", from 0.46 to 1.0 mmol/l, 20%; Fine. a Gaussian plot was built, a symmetrical concentration distribution was obtained. Acetylcholine (Figure 1). The obtained data on Ach concentration can be regarded as representative and is some generalized characteristic of the sample. Conclusion. Our observations have shown that there is an asymmetric distribution of data, with gastric pathology it can be left-sided, the frequency of occurrence of small values increases up to 40%, with duodenitis, IBS and CP, the distribution can be right-sided, when the frequency of occurrence of high values up to 45% prevails, respectively reduced the frequency of occurrence of average values Ax up to 15-20%. The distribution of PhAC, especially Ach in the intestine may confirm the presence of the "intestinal" brain and its functional state. Output. 1. PhAC concentration is a constantly changing data, which explains the diversity of data from researchers. 2. These constantly changing data explain the "oscillatory" changes and they are necessary for the regulation of the secretory function of a cell, tissue, organ. In "living systems". Termination or "freezing" of regulatory mechanisms leads to functional dysfunction.

