

Historical evolution of the concept of health in Western medicine

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Summary. “Health” is a positive multi-dimensional concept involving a variety of features, ranging from ability to integrity, from fitness to well-being. According to the first principle of the constitution of the World Health Organization “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. This constitution was adopted by the International Health Conference held in New York in June–July 1946 and became operative in April 1948. This classical, seventy-year old definition of the World Health Organization is nowadays considered a historical one and it stands as a fundamental milestone of a diachronic track beginning, in Western medicine, with the definition of health proposed by Hippocrates and his School. For Hippocrates health was the state of equilibrium of four humours. This philosophical-naturalistic definition has been flanked in the history of Western medicine by various concepts of health and disease, alternatively based, according to different scientists and in different medical contexts and periods, on epidemiological, anatomical, physiological, functional, social and molecular perspectives. Since biomedical definitions are always prone to integration and updating, depending on the continuous achievements of medical science and bioethics, the fascinating journey through the concepts of health and disease, the fundamental milestones of which are here briefly proposed, is still in progress. (www.actabiomedica.it)

Key words: health, disease, history of medicine, bioethics, anatomy, physiology, epidemiology, methodology

“Health” is a positive multi-dimensional concept involving a variety of features, ranging from ability to integrity, from fitness to well-being. According to the first principle of the constitution of the World Health Organization (WHO) “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (1). This constitution was adopted by the International Health Conference held in New York in June 1946; it was signed in July 1946 by the representatives of 61 States and became operative in 1948. This classical, seventy-year old definition of the WHO is nowadays considered historical and it stands as a fundamental milestone in the diachronic track beginning, in Western medicine, with the definition of health proposed by the Hippocratic School (2).

The Greek physician Hippocrates of Cos (460-ca.377) is considered the father of medicine in the

Western world and the founder of a school according to which the human body was retained to be a container of four liquids, the so-called humours. Blood, phlegm, black bile and yellow bile were these humours, and health was constituted by the state of equilibrium of these substances. In turn, disease was the condition of their imbalance (3). Health, as formalized in the conceptual framework of the Hippocratic School, was a philosophical-naturalistic conceit, nonetheless retaining relevant and long-lasting practical consequences. In effect, given that blood, because of its location and composition, was the only humour that could be safely collected, blood-letting became in the V-IV centuries before Christ the universal “therapeutic” intervention implemented to restore good health in the case of potentially every disease. This practical fall-out of the classical Greek theoretical idea of health has remained de-

cisively active for many centuries; indeed, at the beginning of the XX century in many prestigious European hospitals blood-letting was still considered the cornerstone of the treatment of various pathologies, ranging from pneumonia to tuberculosis. Even the consolidated Western medical tradition of administering purges and emetics to the sick finds its conceptual motivation in the Hippocratic humoral theory (4).

In the course of the Renaissance (XIV-XVIII centuries) other concepts of health were proposed by illustrious physicians and scholars. According to the German-Swiss physician and alchemist Philippus Aureolus Theophrastus Bombastus von Hohenheim, generally known as Paracelsus (1493-1541), human health resided in the harmonic correspondence between the microcosm of the human being and the macrocosm of the entire universe. Paracelsus not only ascribed the causes of diseases to different entities - the ideal, the spiritual, the natural, the poisonous and the planetary ones - as he wrote in his "Opus Paramirum" (1531), but also to the principles identified in sulphur, mercury and salt (5). In the case of pathologies, and so to re-establish the philosophical-physical state of health, Paracelsus prescribed remedies derived from alchemy and suggested the ample implementation of the concept of similarity as a curative principle (the famous idea of "similia similibus" - "things should be treated with similar things") (6). Still in the XVI century, the Italian physician and astronomer Girolamo Fracastoro (1478-1553) put forward an innovative view of health and disease. On the basis of the observation of the many and serious infectious diseases of his time, Fracastoro hypothesized that pathologies were determined by the transmission of "seminaria" ("seeds" of disease) that propagated from sick people to healthy ones through direct contact or by means of personal items (7). The idea of these "seminaria", to all effects and purposes precursors of modern germs and microbes, was specifically elaborated by this Italian doctor and geologist through his ample consideration of the frequent and devastating occurrence of syphilis (8). The concepts of health and disease identifiable in the works of Fracastoro anticipate, according to some medical historians, the modern "epidemiologic" assessment of (infectious) pathologies in large populations.

In the XVIII century the concepts of health and

disease were developed and enriched by other notable scholars privileging, in different European countries and in various cultural settings, "anatomical" or "physiological" views of the matter (9). The Italian physician and anatomist Giovanni Battista Morgagni (1682-1771) retained good health to be the status of clinical-anatomical integrity of the human organism. An illustrious clinician and pathologist, he considered disease the anatomical alteration of one or more organs of human bodies, that he had accurately described as consequence of hundreds of dissections personally performed (10). On "physiological" grounds, the Scottish physician John Brown (1735-1788), propounder of the "excitability" theory of medicine, was of the idea that human health depended on the sound interaction between the internal excitability typical of the body and the numerous external stimuli, that he named "exciting powers", to which human organisms are subjected and to which they had to respond (11). As consequence, Brown subdivided diseases according to their ability to exert an over- or an under-stimulating influence on the human body (12). The Swiss professor of medicine and biologist Albrecht von Haller (1708-1777), considered one of the founders of experimental physiology, and his 1766 masterpiece "Elementa physiologiae corporis humani" should be remembered (13). In the context of human health and pathology that he investigated in physiological terms, he furnished a complete description of the perceptive faculty characteristic of nervous fibres, which became his famous concept of "sensibility", and he provided a description of the contractile muscular capacity prompted by irritation ("irritability") (14, 15).

In the XIX century the ideas of health and disease based on physiological and anatomical research were further pursued. "Physiologically" speaking, the French philosopher and physiologist Claude Bernard (1813-1878), considered a pioneer of the application of the principles of experimentation to life sciences, elaborated the concept of "internal environment" ("milieu intérieur") of organisms, leading to the later understanding of human homeostasis (16). Bernard did not consider health and disease as rigidly separated entities but, on the contrary, as two of the components of a continuous spectrum, merging one into the other (17). "Anatomically" speaking, it was in the eighteen hundreds that Morgagni's organic level of investigation was fur-

ther elaborated through the study of the constituents of organs, namely, the tissues and, more significantly, by the research on the singular components of the tissues, namely, the cells. It was precisely in the context of cells that the prestigious German anatomical school collocated, in the XIX century, the roots of the concepts of human health and pathology, identifying in altered cells the triggering points of diseases (18). One of the major representatives of this school, the pathologist Rudolf Virchow (1821-1902), should be remembered for his pioneeristic studies on a number of pathological processes, scientifically investigated at the cellular level.

In the course of the XX century, on the one hand the study of normal and pathologic cells left space to the consideration of sub-cellular components, and medicine became more and more molecular and sub-microscopic; on the other hand, a renewed global attention to human beings, both healthy and sick, gave origin to synergic, multi-faceted definitions of health (and disease). An example is precisely that of WHO presented at the beginning of this text, which shows how account was taken not only of physical-anatomical features, but also of mental-psychological and social-functional ones.

The progress of medical sciences in the nineteen hundreds was explosive, with many new, original achievements leading to a change of classical paradigms in a number of biomedical areas (19,20), among which the ample epistemological one dealing with the concepts themselves of health and disease may be remembered. As a consequence, even the historical WHO concept of health has in turn become the object of scientific and bioethical discussion, demonstrating that the fascinating journey through the notions of health and disease, whose fundamental milestones have been briefly proposed, is still in progress.

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