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Cereals, Legumes and Vegetables
in Medical Literature Sources of Antiquity and Early Byzantine Times
(from the second to the seventh century)

Summary

The purpose of this dissertation is to discuss the culinary and medical role of cereals, legumes and vegetables as well as other food products obtained from them in the times of Antiquity and early Byzantium based on Greek sources on medical issues. It is also aimed at presenting opinions on dietary properties of the three aforementioned food groups included in those sources as well as of food products and meals obtained from them.

The chronological frameworks, as given in the dissertation title, are established by the second and seventh century. The initial landmark refers to the activity of Galen (c. 130 – c. 216 AD), the most renowned physician of late Antiquity, the author of several dozen of treatises on various issues related to medical treatment where he summarized all the previous achievements of Greek medicine and creatively expanded the humeral system originated by Hippocrates. The high quality of his works, their attention to detail and very wide range of the materials discussed were the reason why the legacy of Galen dominated the medical thought for whole centuries (in the times of the late Roman Empire, Byzantium, the circle of Arabic culture, in the Latin west of Europe and until modern times respectively). Subsequent authors whose works survived until our times and have been analysed by me, i.e. Oribasius (the fourth century), Aetius of Amida (the sixth century), Alexander of Tralles (the sixth century), Anthimus (the sixth century), Paul of Aegina (the seventh century) and an anonymous author of the treaty *On Foods* (the seventh century) retained the findings presented in the works of Galen. The reason for choosing the seventh century, on the other hand, were transformations – mostly unfavourable ones – partly related to epidemics raging still in the sixth century, the resulting economic crises and financial difficulties faced by the Byzantine Empire as well as the deterioration of the society's general condition. These transformations involved such fields of human activity as the military or the functioning of urban centres. Incursions of various peoples on different parts of the country (Avars and Slavs in the Balkans, Persians and Arabs in Asia Minor, Syria and Egypt) caused more or less permanent changes of border lines and population structure of which the most significant one was Byzantium's loss of territories of the Middle East and Northern Africa that were taken over by Muslim invaders. A different issue was the one of Latin language

that was gradually driven out of various fields of life by the Greek language, which phenomenon could be observed since the middle of the sixth century as well as transformations in the area of art related to mass production of icons, which also intensified as subsequent decades passed, or the evolution of certain forms of religiousness related to, among others, the fact of worshipping these icons. Those factors caused an emergence, out of the confusion of the seventh century, of a state that was so different from the one existing so far, that it was commonly referred to as Middle Byzantine. Science, including medicine, was also affected by these transformations. After the seventh century there commenced a period of a few hundred years during which no significant treatises on medicine appeared, which seemed to be additional justification for the closure of the period under analysis falling in that century.

The works of the authors mentioned before originate from this time framework and they were the basis for my analysis, e.g. *De alimentorum facultatibus*, *De victu attenuante*, *De ptisane*, *De compositione medicamentorum secundum locos*, *De simplicium medicamentorum temperamentis ac facultatibus* or *De compositione medicamentorum per genera* written by Galen, *Collectiones medicae*, *Synopsis ad Eusthatium filium*, *Libri ad Eunapius* and *Eclogae medicamentorum* by Oribasius, *Iatricorum libri* by Aetius of Amida, *Therapeutica* and *De febribus* by Alexander of Tralles, *De observatione ciborum* by Anthimus, *Epitome* by Paul of Aegina and an anonymous work *De cibis*. Apart from the aforementioned sources – in order to give a more thorough picture of the topic analyzed – I also used works by other authors going beyond the adopted frameworks either as far as their chronology or subject matter is concerned. This group of sources did not constitute the basis for my study; its purpose was merely to complete the general picture. The most important titles that might be included under this category are the treatises of Hippocrates entitled *De diaeta*, *De diaeta on morbis acutis*, *De morbis*, *De mulierum affectibus* and *De alimento*; the works by Dioscorides *De material medica* and *De simplicis*, *Historia naturalis* by Pliny, the treatise *De re coquinaria* attributed to Apicius, the monumental work by Athenaeus of Naucratis *Deipnosophistae*, as well as agronomical treatises by Cato (*De agri cultura*), by Varro (*De re rustica*), by Columella (*De re rustica*), by Palladius (*Opus agriculturae*) and by an anonymous author (*Geoponica*).

Based on the analysis of the aforementioned texts, in some cases supplemented by other sources, the following conclusions may be drawn.

The most popular group of food in the period between the second and the seventh century was cereals. The most popular species of cereals, among these familiar in those times in the Mediterranean region and territories north of the line of the Alps and the Danube river, subject to the reign of Rome and Constantinople, and remaining under Greek and Roman influences,

were common wheat and barley. Other less popular species of wheat were emmer, einkorn and spelt, then common millet and foxtail millet, common oat and rice. According to the sources the one that was the least valued was common rye. Various foods were produced from cereals. The most important ones were types of baking products which constituted the most valued basis of everyday nutrition, and the one that was considered to be undoubtedly most delicious and healthiest was white wheat bread. Apart from that, plants included in this group were used for cooking various soups, pulps, or gunges being the second, after bread, most important component of the diet in those times (for preparation of those many types of cereals were used, however, it was mostly barley, which was highly valued in that form) as well as groats, flour and starch and many other dishes like pancakes or pies.

The second most popular group of products constituting diet in the discussed period were legumes (although the category, which in those times was called *óspria*, also included some species that were not actually leguminous plants, it was clearly dominated by the latter). The well-known and used species were lentil, broad bean, lupine, chickpea, pea, garden vetch, ervil (bitter) vetch, fenugreek. They were a very important supplement of everyday menu, especially in view of frequent shortage of meat in everyday diet of most part of the society living in the times of late Antiquity and early Byzantium. They were mostly used for preparing less or more thick pulps and soups, often with many additives enriching their flavor. Apart from that they were used to obtain flour, however, it was not suitable for baking bread. Legumes were often eaten boiled or in a form of a roasted snack.

Green vegetables were a food group that constituted only a supplement to the diet basis that was composed of cereals and leguminous plants. Nevertheless, it has to be emphasized that this supplement played a crucial role in those conditions since not only did it add flavor to diet, providing the human body with valuable ingredients not found in cereals and legumes, but also, in periods of poor crops of those two major vegetable food groups, sometimes it was the only source of available food that saved people from starvation. The role of vegetables was even more significant due to the fact that in the period analyzed by me many species (including those wild ones), not to be found on contemporary tables, were also eaten. Therefore, apart from those that are also eaten today such as carrot, onion, garlic, beetroot, leek, cabbage or lettuce, what composed the diet in those times were e.g. nettle, wild rose, carthamus lanatus, bryonia or vitex agnus-castus (monk's pepper). Vegetables were eaten both after heat treatment (cooking, frying, roasting) and raw or pickled. At times they were elements of exquisite and elaborate dishes served on special occasions.

All the aforementioned food groups, and particular species included in each of them, found their therapeutic applications in medicine of the period between the second and the seventh century. The group that most information is provided on in preserved sources are cereals, particularly common wheat and common barley, however, the other species were also used in numerous therapeutic procedures. As far as the other food groups are concerned plants such as onion and cabbage were especially highly valued as medicaments. It is worth noting some specific food products that made a special name for themselves owing to their positive effect on health and number of therapeutic applications. What deserves particular attention here is *ptisáne* – a kind of barley soup which was regarded almost as a panacea. Cereals, leguminous plants, vegetables and products obtained from them were applied both internally, in a form of therapeutic meals, as well as externally, e.g. as compresses or ointments.

What is worth mentioning here and was confirmed in the course of this study, is the continuance of medical doctrines on the impact of the analyzed food groups on human health as well as their dietary properties. Information presented in Galen's works (which often had its origin even in earlier times) may also be found in the works of later authors here analyzed, until the end of the period covered by the study, i.e. about 600 years following the activity of the distinguished Pergamonian physician. On the one hand, the observed phenomenon results from the advanced stage that this branch of medicine entered into thanks to Galen who gathered all, in his opinion most accurate, achievements of his predecessors and supplemented them with his own experience. On the other hand, it is caused by a very slow pace of transformations in such fields of human activity as agriculture, gastronomy and medicine. All those factors resulted in the fact that the findings made by Galen could be repeated by future physicians as still fitting the existing conditions and best functioning in them.

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