JAMES JOSEPH WALSH

MEDIEVAL MEDICINE

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Содержание

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PREFACE

"Medieval Medicine" is the story of the medical sciences in the Middle Ages. The Middle Ages are usually assumed to begin with the deposition of Romulus Augustulus, 476, and end with the fall of Constantinople, 1453. In this little volume, then, we have to outline the history of human efforts to prevent and treat the ills of mankind for nearly one thousand years. Until recently, it has been the custom to believe that there was so little of genuine interest in anything like the scientific care of ailing human beings during these centuries, that even a volume of this kind might seem large for the tale of it. Now we know how much these men of the Middle Ages, for so long called the "Dark Ages," were interested in every phase of human progress. They created a great art and literature, and above all a magnificent architecture. We have been cultivating the knowledge of these for several generations, and it would indeed be a surprise to find that the men who made such surpassing achievements in all the other lines of human effort should have failed only in medicine.

As a matter of fact, we have found that the history of medicine and surgery, and of the medical education of the

Middle Ages, are quite as interesting as all the other phases of their accomplishments. Hence the compression that has been necessary to bring a purview of all that we know with regard to medieval medicine within the compass of a brief book of this kind. The treatment has been necessarily fragmentary, and yet it is hoped that the details which are given here may prove suggestive for those who have sufficient interest in the subject to wish to follow it, and may provide an incentive for others to learn more of this magnificent chapter of the work of the medieval physicians.

MEDIEVAL MEDICINE

CHAPTER I
INTRODUCTORY

To understand the story of Medieval Medicine, the reader must recall briefly the course of Roman history. Rome, founded some eight centuries before Christ, was at first the home of a group of adventurers who, in the absence of women enough to supply wives for their warriors, went out and captured the maidens of a neighbouring Sabine town. The feud which broke out as a result was brought to an end by the women now become the wives of the Romans, and an alliance was made. Gradually Rome conquered the neighbouring cities, but was ever so much more interested in war and conquest than in the higher life. The Etruscan cities, which came under her domination, now reveal in their ruins art objects of exquisite beauty and the remains of a people of high artistic culture. When Rome conquered Carthage, Carthage was probably the most magnificent city in the world, and Rome was a very commonplace collection of houses. Culture did not come to Rome until after her conquest of Greece, when "captive Greece led her captor captive."

Sir Henry Maine's expression that whatever lives and moves in

the intellectual life is Greek in origin may not be unexceptionably true, but it represents a generalization of very wide application.

Rome was stimulated in art and architecture and literature by touch with the Greeks, and her own achievements, important though they were, were little better than copies of Greek originals. The Romans themselves acknowledged this very frankly. When in the course of time the barbarian nations from the North and West of Europe came down in large numbers into Italy, and finally gained control of the Roman Empire, they had but very little interest in the Greek sources, and decadence of the intellectual life was inevitable. This was particularly true as regards scientific subjects, and above all for medicine; for the Romans had always depended on Greek physicians, and Galen in the second century, like Alexander of Tralles in the seventh, represent terms in the series of physicians who reached distinction at Rome.

The key to the history of medicine in the Middle Ages, then, is always the presence of Greek influence. This persisted in the Near East, and consequently serious scientific medicine continued to flourish there, at first among the Christians and later among the Arabs. It was not for any special incentive of their own that the Arabs became the intellectual leaders of Europe during the tenth and eleventh centuries, but the fact that their geographical position in Asia Minor close to Greek sources provided them with the opportunity to know the old Greek authors, especially in philosophy and medicine, and therefore to

be almost forced to become the channels through which Greek influences were carried into the West once more.

Before the coming of the Arabs, however—that is, before the rise of Mohammedanism—there was an important chapter of medieval medicine which is often not appreciated at its true worth. The contributors to it deserve to be well known, and fortunately for us in the modern time were properly appreciated during the early days of the art of printing, in the Renaissance time, and accordingly their books were printed, and came to be distributed in many copies, which have rendered them readily available in the modern time.

In Asia Minor, where Greek influence persisted as it did not in Italy, we have a series of distinguished contributors to medicine, or rather, medical literature—that is, men whose books represent a valuable compilation and digestion of the important medical writings from before their time, often enriched by their own experience. The first of these was Aëtios Amidenus—that is, Aëtios of Amida—born in the town of that name in Mesopotamia on the Upper Tigris (now Diarbekir), who flourished in the sixth century. Aëtios, or in the Latin form Aëtius, wrote a textbook that has often been republished in the modern time, and that shows very clearly how well the physicians of this period faced their medical and surgical problems, how thoroughly equipped they were by faithful study of the old Greek writers, and how successfully they coped with the difficulties of the cases presented to them. He is eminently conservative, a

careful observer, who uses all the means at his command and who well deserves the interest that has been manifested in him at many periods during the almost millennium and a half elapsed since his death.

After Aëtius came Alexander of Tralles, from another of these towns of Asia Minor that we would consider insignificant, sometimes termed Trallianus for this reason. He must be reputed one of the great independent thinkers in medicine whose writings have deservedly attracted attention not only in his own time, but long afterwards in the Renaissance period, and with whose works everyone who cares to know anything about the development of medical history must be familiar. One detail of his life has always seemed to me to correct a whole series of misapprehensions with regard to the earlier Middle Ages. Alexander was one of five brothers, all of whose names have come down to us through nearly 1,500 years because of what they accomplished at the great Capital of the East. The eldest of them was Anthemios, the architect of the great Church of Santa Sophia. A second brother was Methrodoros, a distinguished grammarian and teacher at Constantinople. A third brother was a prominent jurist in the Imperial Courts of the capital; while a fourth brother, Dioscoros, was, like Alexander, a physician of repute, but remained in his birthplace Tralles, and acquired a substantial practice there.

There is sometimes the feeling that at this time in the world's history, the end of the sixth and the beginning of the seventh century, men had but little initiative, and above all very little

power of achievement in the intellectual order. Anyone who knows Santa Sophia in Constantinople, however, will recognize at once that the architect who conceived and superintended the construction of that great edifice was a genius of a high order, not lacking in initiative, but on the contrary possessed of a wonderful power of original accomplishment. No greater constructive work, considering all the circumstances, has perhaps ever been successfully planned and executed. It would scarcely be expected that the brother of the man who conceived and finished Santa Sophia would, if he set out to write a textbook of medicine, make an egregious failure of it. Surely his work would not be all unworthy of his brother's reputation, and the family genius should lift him up to important accomplishment. This is literally what we find true with regard to Alexander. After years of travel which led him into Italy, Gaul, Spain, and Africa, he settled down at Rome, and practised medicine successfully until a very old age, and probably lectured there, for some of his books are in the form of lectures.

Fortunately for us, he committed his knowledge and his experience to writing, which has come down to us.

A third of these greater writers on medicine in the early Middle Ages was Paul of Ægina—Æginetus as he is sometimes known. There has been some question as to his date in history, but as he quotes Alexander of Tralles there seems to be no doubt now that his career must be placed in the first half of the seventh century. We shall see more of him, as also

of his great contemporaries and predecessors of the early Middle Ages, Aëtios and Alexander of Tralles, in a subsequent chapter. Besides these men who were known for their writings, a series of less known Christian physicians were praised by their contemporaries for their knowledge of medicine. Among them are particularly to be noted certain members of an Arabian family with the title Bachtischua, a name which is derived from the Arabic words *Bocht Jesu*—that is, servant of Jesus—who, having studied among the Greek Christians in the cities of Asia Minor, were called to the Court of Haroun al-Raschid and introduced Greek medicine to the Mohammedans. I have pointed out in my volume "Old-Time Makers of Medicine"[1] that "it was their teaching which aroused Moslem scholars from the apathy that characterized the attitude of the Arabian people towards science at the beginning of Mohammedanism."

After this preliminary period of early medieval medical development, the next important phase of medicine and surgery in the Middle Ages developed in the southern part of Italy at Salerno. Here came the real awakening from that inattention to intellectual interests which characterized Italy after the invasion of the northern barbarians. The reason for the early Renaissance in this neighbourhood is not far to seek. In the older times Sicily had been a Greek colony, and the southern portion of Italy had been settled by Greeks and came to be known as Magna Græcia. The Greek language continued to be spoken in many parts even

[1] Fordham University Press, New York, 1911.

during the earlier medieval centuries, and Greek never became the utterly unknown tongue it was in Northern Italy. With the turning of attention to education in the later Middle Ages, the Southern Italians were brought almost at once in contact with Greek sources, and the earlier Renaissance began. With this in mind, it is comparatively easy to understand the efflorescence of culture in Southern Italy, and the development of the important University of Salerno and its great accomplishment, particularly in scientific matters, though all this came almost entirely as a consequence of the opportunity for Greek influence to have its effect there.

It is sometimes said that Arabian influence meant much for the development of Salerno, and that it was because the southern part of the Italian peninsula was necessarily rather closely in touch with Arabian culture that an early awakening took place down there. The Mohammedans occupied so many of the islands of the Mediterranean, as well as Spain, that their influence was felt deeply all along its shore, and hence the first university of Europe in modern times came into existence in this part of the world. Montpellier is sometimes, though not so often, said to have had the same factor in its early development. Undoubtedly there was some Arabian influence in the foundation of Salerno. The oldest traditions of the University show this rather clearly. This Arabian influence, however, has been greatly exaggerated by some modern historical writers. Led by the thought that Christianity was opposed to culture, and above all to science, they

were quite willing to suggest any other influences than Christian as the source of so important a movement in the history of human progress as Salerno proved to be. The main influence at Salerno, however, was Greek, and the proof of this is, as insisted by Gurlt in his "History of Surgery," that the great surgeons of Salerno do not refer to Arabian sources, but to Greek authors, and their books do not show traces of Arabian influences, but on the contrary have many Græcisms in them.

Salerno represents an especially important chapter in the history of Medieval Medicine. As we shall see, the teachers at the great medical school there set themselves in strenuous opposition to the Arabian tendency to polypharmacy, by which the Oriental mind had seriously hurt medicine, and what is still more to the credit of these Salernitan teachers, they developed surgery far beyond anything that the Arabs had attempted. Indeed, surgery in the later centuries of Arabian influence had been distinctly neglected, but enjoyed a great revival at Salerno. Besides, the Salernitan physicians used all the natural methods of cure, air, water, exercise, and diet, very successfully. If any other proof were needed that Arabian influence was not prominent at Salerno, surely it would be found in the fact that women physicians enjoyed so many privileges there. This is so entirely opposed to Mohammedan ways as to be quite convincing as a demonstration of the absence of Arabian influence.

From Salerno, the tradition of medicine and surgery spread to Bologna early in the thirteenth century, and thence to the other

universities of Italy and to France. Montpellier represented an independent focus of modern progress in medicine, partly due to close relationship with the Moors in Spain and the Greek influences they carried with them from Asia Minor, but not a little of it consequent upon the remnants of the older Greek culture, still not entirely dead even in the thirteenth century, because Marseilles, not far away, had been a Greek colony originally, and still retained living Greek influence, and wherever Greek got a chance to exercise its stimulant incentive modern scientific medicine began to develop.

France owed most of her development in medicine and surgery at the end of the Middle Ages to the stream of influence that flowed out of Italian universities. Such men as Lanfranc, who was an Italian born but exiled; Mondeville, who studied in Italy; and Guy de Chauliac, who has so freely acknowledged his obligation to Italian teachers, were the capital sources of medical and surgical teaching in France in the later Middle Ages.

It is thus easy to see how the two periods of historical import in medicine at the beginning and end of the Middle Ages may be placed in their intimate relation to Greek influences. At the beginning, Greek medicine was not yet dead in Asia Minor, and it influenced the Arabs. When the revival came, it made itself first felt in the portions of Southern Italy and Southern France where Greek influence had been strongest and still persisted. Fortunately for us, the great Renaissance printers and scholars, themselves touched by the Greek spirit of their time, put the

books of the writers of these two periods into enduring printed form, and in more recent years many reprints of them have been issued. These volumes make it possible for us to understand just how thoroughly these colleagues of the Middle Ages faced their problems, and solved them with a practical genius that deserves the immortality that their works have been given.

The history of medicine and surgery during the Middle Ages has been greatly obscured by the assumption that at this time scientific medicine and surgery could scarcely have developed because men were lacking in the true spirit of science. The distinction between modern and medieval education is often said to be that the old-time universities sought to increase knowledge by deduction, while the modern universities depend on induction. Inductive science is often said to be the invention of the Renaissance period, and to have had practically no existence during the Middle Ages. The medieval scholars are commonly declared to have preferred to appeal to authority, while modern investigators turn to experience. Respect for authority is often said to have gone so far in the Middle Ages that no one ventured practically to assert anything unless he could find some authority for it. On the other hand, if there was any acknowledged authority, say Aristotle or Galen, men so hesitated to contradict him that they usually followed one another like sheep, quoting their favourite author and swearing by the authority of their chosen master. Indeed, many modern writers have not hesitated to express the greatest possible wonder that the men of the

Middle Ages did not think more for themselves, and above all did not trust to their own observation, rather than constantly rest under the shadow of authority.

Above all, it is often asked why there was no nature study in the Middle Ages—that is, why men did not look around them and see the beauties and the wonders of the world and of nature, and becoming interested in them, endeavour to learn as much as possible about them. Anyone who thinks that there was no nature study in the Middle Ages, however, is quite ignorant of the books of the Middle Ages. Dante, for instance, is full of the knowledge of nature. What he knows about the ants, and the bees, and many other insects; about the flowers, and the birds, and the habits of animals; about the phosphorescence at sea and the cloud effects, and nearly everything else in the world of nature around him, adds greatly to the interest of his poems. He uses all these details of information as figures in his "Divine Comedy," not in order to display his erudition, but to bring home his meaning with striking concreteness by the metaphors which he employs. There is probably no poet in the modern time who knows more about the science of his time than Dante, or uses it to better advantage.

It is sometimes thought that the medieval scholars did not consider that experience and observation were of any value in the search for truth, and that therefore there could have been no development of science. In an article on "Science at the Medieval Universities"[2] I made a series of quotations from the two great

[2] *Popular Science Monthly*, May, 1911.Si vis incolumem, si vis te reddere

scientific scholars of the thirteenth century, Albertus Magnus and Roger Bacon, with regard to the question of the relative value of authority and observation in all that relates to physical science. Stronger expressions in commendation of observation and experiment as the only real sources of knowledge in such matters could scarcely be found in any modern scientist. In Albert's tenth book of his "Summa," in which he catalogues and describes all the trees, plants, and herbs known in his time, he declares: "All that is here set down is the result of our own experience, or has been borrowed from authors whom we know to have written what their personal experience has confirmed; for in these matters experience alone can be of certainty." In his impressive Latin phrase, *experimentum solum certificat in talibus*. With regard to the study of nature in general he was quite emphatic. He was a theologian as well as a scientist, yet in his treatise on "The Heavens and the Earth," he declared that: "In studying nature we have not to inquire how God the Creator may, as He freely wills, use His creatures to work miracles, and thereby show forth His power. We have rather to inquire what nature with

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sanum,Cures tolle graves, iras crede profanum.Parce mero—cœnato parum, non sit tibi vanumSurgere post epulas; somnum fuge meridianum;Ne mictum retine, nec comprime fortiter anum;Hæc bene si serves, tu longo tempore vives.The Salerne Schoole doth by these lines impartAll health to England's King, and doth adviseFrom care his head to keepe, from wrath his harte.Drink not much wine, sup light, and soone arise.When meat is gone long sitting breedeth smart;And after noone still waking keepe your eies,When mou'd you find your selfe to nature's need,Forbeare them not, for that much danger breeds,Use three physitians still—first Dr. Quiet,Next Dr. Merry-man, and third Dr. Dyet.

its immanent causes can naturally bring to pass."

Roger Bacon, the recent celebration of whose seven hundredth anniversary has made him ever so much better known than before, furnishes a number of quotations on this subject. One of them is so strong that it will serve our purpose completely. In praising the work done by Petrus, one of his disciples whom we have come to know as Peregrinus, Bacon could scarcely say enough in praise of the thoroughly scientific temper, in our fullest sense of the term, of Peregrinus's mind. Peregrinus wrote a letter on magnetism, which is really a monograph on the subject, and it is mainly with regard to this that Roger Bacon has words of praise. He says: "I know of only one person who deserves praise for his work in experimental philosophy, for he does not care for the discourses of men and their wordy warfare, but quietly and diligently pursues the works of wisdom. Therefore, what others grope after blindly, as bats in the evening twilight, this man contemplates in their brilliancy, *because he is a master of experiment*. Hence, he knows all of natural science, whether pertaining to medicine and alchemy, or to matters celestial or terrestrial. He has worked diligently in the smelting of ores, as also in the working of minerals; he is thoroughly acquainted with all sorts of arms and implements used in military service and in hunting, besides which he is skilled in agriculture and in the measurement of lands. It is impossible to write a useful or correct treatise in experimental philosophy without mentioning this man's name. Moreover, he pursues knowledge for its own

sake; for if he wished to obtain royal favour, he could easily find sovereigns who would honour and enrich him."

Roger Bacon actually wanted the Pope to forbid the study of Aristotle because his works were leading men astray from the true study of science—his authority being looked upon as so great that men did not think for themselves, but accepted his assertions. Smaller men are always prone to act thus at any period in the world's history, and we undoubtedly in our time have a very large number who do not think for themselves, but swear on the word of some master or other, and very seldom so adequate a master as Aristotle.

Bacon insisted that the four great grounds of human ignorance are: "First, trust in inadequate authority; second, that force of custom which leads men to accept without properly questioning what has been accepted before their time; third, the placing of confidence in the assertions of the inexperienced; and fourth, the hiding of one's own ignorance behind the parade of superficial knowledge, so that we are afraid to say, 'I do not know.'" Prof. Henry Morley suggested that: "No part of that ground has yet been cut away from beneath the feet of students, although six centuries have passed. We still make sheepwalks of second, third, and fourth, and fifth hand references to authority; still we are the slaves of habit, still we are found following too frequently the untaught crowd, still we flinch from the righteous and wholesome phrase, 'I do not know,' and acquiesce actively in the opinion of others that we know what we appear to know."

It used to be the custom to make little of the medieval scientists because of their reverence for Aristotle. Generations who knew little about Aristotle, especially those of the seventeenth and eighteenth centuries, were inclined to despise preceding generations who had thought so much of him. We have come to know more about Aristotle in our own time, however, and as a consequence have learned to appreciate better medieval respect for him. Very probably at the present moment there would be almost unanimous agreement of scholars in the opinion that Aristotle's was the greatest mind humanity has ever had. This is true not only because of his profound intellectual penetration, but above all because of the comprehensiveness of his intelligence. For depth and breadth of mental view on a multiplicity of subjects, Aristotle has never been excelled and has but very few rivals. The admiration of the Middle Ages for him, instead of being derogatory in any way to the judgment of the men of the time, or indicating any lack of critical appreciation, rather furnishes good reasons for high estimation of both these intellectual modes of the medieval mind. Proper appreciation of what is best is a much more difficult task than condemnation of what is less worthy of regard. It is the difference between constructive and destructive criticism. Medieval appreciation of Aristotle, then, constitutes rather a good reason for admiration of them than for depreciation of their critical faculty; and yet they never carried respect and reverence to unthinking worship, much less slavish adoration. Albertus Magnus, for instance, said:

"Whoever believes that Aristotle was a God must also believe that he never erred; but if we believe that Aristotle was a man, then doubtless he was liable to err just as we are." We have a number of direct contradictions of Aristotle from Albert. A well-known one is that with regard to Aristotle's assertion that lunar rainbows appeared only twice in fifty years. Albert declared that he himself had seen two in a single year.

Galen, after Aristotle, was the author oftenest quoted in the Middle Ages, and most revered. Anyone who wants to understand this medieval reverence needs only to read Galen. There has probably never been a greater clinical observer in all the world than this Greek from Pergamos, whose works were destined to have so much influence for a millennium and a half after his time. How well he deserved this prestige only a careful study of his writings will reveal. It is simply marvellous what he had seen and writes about. Anatomy, physiology, pathological anatomy, diagnosis, therapeutics—all these were magnificently developed under his hands, and he has left a record of accurate and detailed observation. There are many absurdities easily to be seen in his writings now, but no one has yet written on medicine in any large way who has avoided absurdities, nor can anyone hope to, until we know much more of the medical sciences than at present. The therapeutics of any generation is always absurd to the second succeeding generation, it has been said. Those in the modern time who know their Galen best have almost as much admiration for him, in spite of all our advance in the knowledge

of medicine, as the medieval people had. No wonder, seeing the depth and breadth of his knowledge, that he was thought so much of, and that men hesitated to contravene anything that he said.

Even in the authorities to which they turned with so much confidence, the medieval physicians are admirable. If man must depend on authority, then he could not have better than they had. As with regard to this, so in all other matters relating to the Middle Ages, the ordinarily accepted notions prove to have been founded on ignorance of actual details, and misconceptions as to the true significance of their point of view. To have contempt give way to admiration, we need only to know the realities even in such meagre details as can be given in a short manual of this kind. The thousand years of the Middle Ages are now seen to have been full of interesting and successful efforts in every mode of human activity, and medicine and surgery shared in this to the full.

CHAPTER II
EARLY MEDIEVAL MEDICINE

There are two distinct periods in the history of Medieval Medicine. The first concerns the early centuries, from the sixth to the ninth, and is occupied mainly with the contributions to medicine made by those who were still in touch with the old Greek writers; while the second represents the early Renaissance, when the knowledge of the Greek writers was gradually filtering back again, sometimes through the uncertain channel of the Arabic. Both periods contain contributions to medicine that are well worthy of consideration, and nearly always the writings that have been preserved for us demonstrate the fact that men were thinking for themselves as well as studying the Greek writers, and were making observations and garnering significant personal experience. The later Middle Ages particularly present material in this regard of far greater interest than was presumed to exist until comparatively recent historical studies were completed.

The real history of medicine in the Middle Ages—that is, of scientific medicine—is eclipsed by the story of popular medicine. So much has been said of the medical superstitions, many of which were rather striking, that comparatively little space has been left for the serious medical science and practice of the time, which contain many extremely interesting details. It is

true that after the Crusades mummy was a favourite pharmacon, sometimes even in the hands of regular physicians; and *Usnea*, the moss from the skulls of the bodies of criminals that had been hanged and exposed in chains, was declared by many to be a sovereign remedy for many different ills; but it must not be forgotten that both of these substances continued to be used long after the medieval period, mummy even down to the middle of the eighteenth century, and Usnea almost as late. Indeed, it is probable that the seventeenth and eighteenth centuries present many more absurdities in therapeutics than do the later centuries of the Middle Ages. In this, as in so many other regards, the modern use of the adjective medieval has been symbolic of ignorance of the time rather than representative of realities in history.

Popular medicine is always ridiculous, though its dicta are often accepted by supposedly educated people. This has always been true, however, and was never more true than in our own time, when the vagaries of medical faddism are so strikingly illustrated, and immense sums of money spent every year in the advertising of proprietary remedies, whose virtues are often sadly exaggerated, and whose tendency to work harm rather than good is thoroughly appreciated by all who know anything about medicine. The therapeutics of supposedly scientific medicine are often dubious enough. A distinguished French professor of physiology quoted, not long since, with approval, that characteristic French expression: “The

therapeutics of any generation are always absurd to the second succeeding generation." When we look back on the abuse of calomel and venesection a century ago, and of the coal-tar derivatives a generation ago, and the overweening confidence in serums and vaccines almost in our own day, it is easy to understand that this law is still true. We can only hope that our generation will not be judged seven centuries from now by the remedies that were accepted for a time, and then proved to be either utterly ineffectual or even perhaps harmful to the patients to whom they were given.

When we turn our attention away from this popular pseudo-history of Medieval Medicine, which has unfortunately led so many even well-informed persons into entirely wrong notions with regard to medical progress during an important period, we find much that is of enduring interest. The first documents that we have in the genuine history of Medieval Medicine, after the references to the organizations of Christian hospitals at Rome and Asia Minor in the fourth and fifth centuries (see chapter Medieval Hospitals), are to be found in the directions provided in the rules of the religious orders for the care of the ailing. St. Benedict (480-543), the founder of the monks of the West, was particularly insistent on the thorough performance of this duty. The rule he wrote to guide his religious is famous in history as a great constitution of democracy, and none of its provisions are more significant than those which relate to the care of the health of members of the community.

One of the rules of St. Benedict required the Abbot to provide in the monastery an infirmary for the ailing, and to organize particular care of them as a special Christian duty. The wording of the rule in this regard is very emphatic. "The care of the sick is to be placed above and before every other duty, as if, indeed, Christ were being directly served in waiting on them. It must be the peculiar care of the Abbot that they suffer from no negligence. The Infirmarian must be thoroughly reliable, known for his piety and diligence and solicitude for his charge." The last words of the rule are characteristic of Benedict's appreciation of cleanliness as a religious duty, though doubtless also the curative effect of water was in mind. "Let baths be provided for the sick as often as they need them." As to what the religious infirmarians knew of medicine, at least as regards the sources of their knowledge and the authors they were supposed to have read, we have more definite information from the next historical document, that concerning medical matters in the religious foundation of Cassiodorus.

Cassiodorus (468-560), who had been the prime minister of the Ostrogoth Emperors, when he resigned his dignities and established his monastery at Scillace in Calabria, was influenced deeply by St. Benedict, and was visited by the saint not long after the foundation.

His rule was founded on that of the Benedictines. Like that, it insisted especially on the care of the sick, and the necessity for the deep study of medicine on the part of those who cared for

them. Cassiodorus laid down the law in this regard as follows: "I insist, brothers, that those who treat the health of the body of the brethren who have come into the sacred places from the world should fulfil their duties with exemplary piety. Let them be sad with others' suffering, sorrowful over others' dangers, sympathetic to the grief of those whom they have to care for, and always ready zealously to help others' misfortunes. Let them serve with sincere study to help those who are ailing as becomes their knowledge of medicine, and let them look for their reward from Him who can compensate temporal work by eternal wages. Learn, therefore, the nature of herbs, and study diligently the way to combine their various species for human health; but do not place your entire hope on herbs, nor seek to restore health only by human counsels. Since medicine has been created by God, and since it is He who gives back health and restores life, turn to Him. Remember, do all that you do in word or deed in the name of the Lord Jesus, giving thanks to God the Father through Him. And if you are not capable of reading Greek, read above all the translations of the Herbarium of Dioscorides, which describes with surprising exactness the herbs of the field. After this, read translations of Hippocrates and Galen, especially the Therapeutics, and Aurelius Celsus' 'De Medicina,' and Hippocrates' 'De Herbis et Curis,' and divers other books written on the art of medicine, which by God's help I have been able to provide for you in my library."

The monasteries are thus seen to have been in touch with

Greek medicine from the earliest medieval time. The other important historical documents relating to Medieval Medicine which we possess concern the work of the men born and brought up in Asia Minor, for whom the Greeks were so close as to be living influences. Aëtius, Alexander of Tralles, and Paul of Ægina have each written a series of important chapters on medical subjects, full of interest because the writers knew their Greek classic medicine, and were themselves making important observations. Aëtius, for instance, had a good idea of diphtheria. He speaks of it in connection with other throat manifestations under the heading of "crusty and pestilent ulcers of the tonsils." He divides the anginas generally into four kinds. The first consists of inflammation of the fauces with the classic symptoms; the second presents no inflammation of the mouth nor of the fauces, but is complicated by a sense of suffocation—apparently our neurotic croup. The third consists of external and internal inflammation of the mouth and throat, extending towards the chin. The fourth is an affection rather of the neck, due to an inflammation of the vertebræ—retropharyngeal abscess—which may be followed by luxation, and is complicated by great difficulty of respiration. All of these have as a common symptom difficulty of swallowing. This is greater in one variety than in another at different times. In certain affections he remarks that even "drinks when taken are returned through the nose."

Aëtius declares quite positively that all the tumours of the neck region, with the exception of scirrhus, are easily cured,

yielding either to surgery or to remedies. The exception is noteworthy. He evidently saw a good many of the functional disturbances and the enlargements of the thyroid gland, which are often so variable in character as apparently to be quite amenable to treatment, and which have actually been "cured" in the history of medicine by all sorts of things from the touch of the hangman's rope to the wrapping of the shed skin of the snake around the neck. A few cervical tumours were beyond resource. Aëtius suggests the connection between hypertrophy of the clitoris and certain exaggerated manifestations of the sexual instinct, as well as the development of vicious sexual habits.

It requires only a little study of this early medieval author to understand why Cornelius, at the time of the Renaissance, was ready to declare: "Believe me, that whoever is deeply desirous of studying things medical, if he would have the whole of Galen abbreviated and the whole of Orbiasius extended, and the whole of Paulus (of Ægina) amplified; if he would have all the special remedies of the old physicians, as well in pharmacy as in surgery, boiled down to a summa for all affections, he will find it in Aëtius."

Alexander of Tralles was, as we have said, the brother of the architect of Santa Sophia of Constantinople, and his writings on medical and surgical subjects are worthy of such a relationship. His principal work is a treatise on the "Pathology and Therapeutics of Internal Diseases" in twelve books, the first eleven books of which were evidently material gathered for

lectures or teaching purposes. He treats of cough as a symptom due to hot or cold, dry or wet, dyscrasias. Opium preparations judiciously used he thought the best remedies, though he recommended also the breathing in of steam impregnated with various ethereal resins.

He outlines a very interesting because thoroughly modern treatment of consumption. He recommends an abundance of milk with a hearty nutritious diet, as digestible as possible. A good auxiliary to this treatment in his opinion was change of air, a sea voyage, and a stay at a watering-place. Ass's and mare's milk are much better for these patients than cow's and goat's milk. We realize now that there is not enough difference in the composition of these various milks to make their special prescription of physical importance, but it is probable that the suggestive influence of the taking of an unusual milk had a very favourable effect upon patients, and this effect was renewed with every drink taken, so that much good was ultimately accomplished. For hæmoptysis, especially when it was acute and due, as Alexander felt, to the rupture of a bloodvessel in the lungs, he recommended the opening of a vein at the elbow or the ankle—in order to divert the blood from the place of rupture to the healthy parts of the circulation. He insisted, however, that the patients must in addition rest, as well as take acid and astringent drinks, while cold compresses should be placed upon the chest [our ice-bags], and that they should take only a liquid diet, at most lukewarm, or, better, if agreeable to them, cold. When

the bleeding stopped, he declared a milk cure [blood-maker] very useful for the restoration of these patients to their former strength.

He paid particular attention to diseases of the nervous system, and discussed headache at some length. Chronic or recurrent headache he attributed to diseases of the brain, plethora, biliousness, digestive disturbances, insomnia, and prolonged worry. Hemicrania he thought due to the presence of toxic materials, though it was also connected with abdominal disorders, especially in women. Alexander has much to say of the paralytic and epileptic conditions, and recommended massage, rubbings, baths, and warm applications for the former, and emphasized the need for careful directions as to the mode of life, and special attention to the gastro-intestinal tract, in the latter. A plain, simple diet, with regular bowels, he considers the most important basis for any successful treatment of epilepsy. Besides, he recommended baths, sexual abstinence, and regular exercise. He rejected treatment of the condition by surgery of the head, either by trephining or by incisions or by cauterization. His teaching is that of those who have had most experience with the disease in our own time. For sore throat he prescribes gargles or light astringents at the beginning, and stronger astringents, alum and soda dissolved in water, later in the case.

He particularly emphasized that trust should not be placed in any single method of treatment. Every available means of bringing relief to the patient should be tried. “The duty of the

physician is to cool what is hot, to warm what is cold, to dry what is moist, and to moisten what is dry. He should look upon the patient as a besieged city, and try to rescue him with every means that art and science placed at his command. The physician should be an inventor, and think out new ways and means by which the cure of the patient's affection and the relief of his symptoms may be brought about." The most important factor in Alexander's therapeutics is his diet. Watering-places and various forms of mineral waters, as well as warm baths and sea baths, are constantly recommended by him. He took strong ground against the use of many drugs, and the rage for operating. The prophylaxis of disease is in Alexander's opinion the important part of the physician's duty. His treatment of fever shows the application of his principle: cold baths, cold compresses, and a cooling diet, were his favourite remedies. He encouraged diaphoresis nearly always, and gave wine and stimulating drugs when the patient was very weak.

Some of the general principles of medical practice which Alexander lays down are very significant even from our modern standpoint. He deprecated drastic remedies of all kinds. He did not believe in severe purgation nor in profuse or sudden blood-letting. His diagnosis was thorough and careful. He insisted particularly on inspection and palpation of the whole body; on careful examination of the urine, of the fæces, and the sputum; on study of the pulse and the breathing. He dwelt on the fact that much might be learned from the patient's history taken carefully.

The general constitution was the most important element, in his estimation. His therapeutics is, above all, individual. Remedies must be administered with careful reference to the constitution, the age, the sex, and the condition of the patient's strength. Special attention must always be paid to seconding nature's efforts to cure. Alexander had no sympathy at all with the idea that nature was to be disturbed, much less that remedies must work in opposition to natural tendencies to recovery.

Paul of Ægina, educated at the University at Alexandria, probably flourished during the reign of the Emperor Heraclius, who died 641; his works contain more of surgical than of medical interest.

The Arab writer, Abul Farag, to whose references we owe the definite placing of the time when Paul lived, said that "he had special experience in women's diseases, and had devoted himself to them with great industry and success. The midwives of the time were accustomed to go to him and ask his counsel with regard to accidents that happen during and after parturition. He willingly imparted his information, and told them what they should do. For this reason he came to be known as the Obstetrician." Perhaps the term should be translated the man-midwife, for it was rather unusual for men to have much knowledge of this subject. His knowledge of the phenomena of menstruation was wide and definite. He knew a great deal of how to treat its disturbances. He seems to have been the first one to suggest that in metrorrhagia, with severe hæmorrhage from

the uterus, the bleeding might be stopped by putting ligatures around the limbs. This same method has been suggested for severe hæmorrhage from the lungs as well as from the uterus in our own time. In hysteria he also suggested ligature of the limbs, and it is easy to understand that this might be a very strongly suggestive treatment for the severer forms of hysteria. It is possible, too, that the modification of the circulation to the nervous system induced by the shutting off of the circulation in large areas of the body might very well have a favourable physical effect in this affection. Paul's description of the use of the speculum is as complete as that in any modern textbook of gynæcology.

In the chapter on the medieval care of the insane, there are some clinical observations and suggestions as to treatment from Paul which make it very clear what a careful observer he was, and how rational in his application of such knowledge as he had to the treatment of patients. Probably his contributions to the difficult subject psychiatry, well above a thousand years ago, will serve to make his genius as a physician clearer than almost anything else that could be said of him.

Among the great Arabian physicians who represent the transition period, from the earlier Middle Ages directly under Greek influence, still surviving to the later Middle Ages, when the earlier Renaissance brought back the Greek masters once more, were Rhazes, Ali Abbas, Avicenna—whose name had been transformed from the Arabic Ibn Sina—Abulcasis,

Avenzoar, and Averroes, the last named a philosophic theorist but not a physician. The first three named were born in the East, the last three in Spain. Besides these Maimonides, the great Jewish physician, who was born and educated at Cordova in Spain, deserves a place. In this earlier period Rhazes must be mentioned, while the others who merit special attention will be considered in the chapter on Later Medieval Medicine.

Rhazes (died 932) is one of the great epoch-makers in the history of medicine. He was the first to give us a clear description of smallpox. Some of his medical aphorisms are well worth noting, and make it very clear that he was a careful observer.

"When you can heal by diet, prescribe no other remedy; and where simple remedies suffice, do not take complicated ones."

Rhazes knew well the value of the influence of mind over body even in serious organic disease, and even though death seemed impending. One of his aphorisms is: "Physicians ought to console their patients even if the signs of impending death seem to be present." He considered the most valuable thing for the physician to do was to increase the patient's natural vitality. Hence his advice: "In treating a patient, let your first thought be to strengthen his natural vitality. If you strengthen that, you remove ever so many ills without more ado. If you weaken it, however, by the remedies that you use, you always work harm." The simpler the means by which the patient's cure can be brought about, the better in his opinion. He insists again and again on diet rather than artificial remedies. "It is good for the physician that

he should be able to cure disease by means of diet, if possible, rather than by means of medicine." Another of his aphorisms seems worth while quoting: "The patient who consults a great many physicians is likely to have a very confused state of mind."

During the ninth and tenth centuries the Arabs continued to be the most important contributors to medicine, until the rise of the school at Salerno gave a new impetus to clinical observation, and furnished a new focus of medical attention in the West. Constantine brought whatever of Arab influence there was in Salerno, as we have pointed out in the chapter on the Beginnings of Medical Education; but after his time there is an originality about Salernitan medicine which makes it of great value as the foster-mother of the sciences related to medicine during the later Middle Ages.

CHAPTER III
SALERNO AND THE BEGINNINGS OF MODERN MEDICAL EDUCATION

The first medical school of modern history, and the institution which more than any other has helped us to understand the Middle Ages, is that of Salerno. Indeed, the accumulation of information with regard to this medical school, formally organized in the tenth century but founded a century earlier, and reaching a magnificent climax of development at the end of the twelfth century, has done more than anything else to revolutionize our ideas with regard to medieval education and the scientific interests of the Middle Ages. We owe this development of knowledge to De Renzi, whose researches with regard to matters Salernitan, and medical education generally in Italy in the Middle Ages, are well deserving of the prestige that has been at length accorded them.

In his "Storia della Medicina in Italia," published so modestly at Naples, the patient Italian student of medical history made an epoch-making contribution to the history of medicine. Unless one has actually read his book, it is difficult to understand how deep our obligations to him are. Anyone who might be tempted to think that medicine was not taken seriously, or that careful clinical observations and serious experiments for the cure of

disease were not made at Salerno, will be amply undeceived by a reading of De Renzi. Above all, he makes it very clear that medical education was taken up with rigorous attention to details and high standards maintained. Three years of college work were demanded in preparation for medical studies, and then four years at medicine, followed by a year of practice with a physician, and even an additional year of special study in anatomy, had to be taken, if surgery were to be practised. All this before the licence to practise medicine was given; though the degree of doctor, granting the privilege of teaching as the word indicates, was conferred apparently after the completion of the four years at the medical school. We have had to climb back to these medieval standards of medical education in many countries in recent years, after a period of deterioration in which often the requirements for the physician's training for practice were ever so much lower.

It may seem surprising that the first medical school should have arisen in the southern part of Italy, but for those who know the historical conditions it will seem the most natural thing in the world that this development should have come in this region. As we have said, touch with Greek has always been the most important factor for modern educational and intellectual development. Salerno was situated in the heart of that Greek colony in the southern part of Italy which came to be known as Magna Græcia. Apparently at no time during the Middle Ages was Greek entirely a dead language in this part of Italy, and there were Greek travellers, Greek sailors, and many other wanderers,

who made their way along the shores of the Mediterranean at this time, and carried with them everywhere the stimulus that always came from association with the Greeks of Asia Minor and of the Grecian Islands and peninsula.

There were two other factors that made for the development of the medical school at Salerno. The first of these seems undoubtedly to have been the presence of the Benedictines, who had a rather important school at Salerno, and who were closely in touch with their great mother-house at Monte Cassino not far away. It was they who imparted the academic atmosphere to the town, and made it possible to gather together the elements for the university which gradually came into existence around the medical school, after that began to attract European attention.

The actual foundation of the medical school, however, seems to have been due to the fortunate accident that Salerno became a health resort, a place to which invalids were attracted from many parts of Europe because the climate was salubrious, and opportunities for obtaining the medical advice of men of many different schools of thought from all over the Mediterranean, and securing the Oriental drugs which were so much valued—as drugs from a distance always are—were there afforded. It is easy to understand that, especially in the winter-time, better-class patients from all over Europe would be glad to go down to the mild temperate climate of Salerno and spend their time there.

It has been pointed out that the first modern university, that of Salerno, had for a nucleus a medical school, representing

man's interest in his body as his primary intellectual purpose in modern history. The second modern university, that of Bologna, gathered around a law school representing man's interest in his property—his second formal purpose in life. And the third, that of Paris, developed around a school of theology and philosophy, demonstrating that man's intellectual interests rise finally to the consideration of his relations to his fellow-man and to God.

The first that we know definitely about the medical school of Salerno, the origin of which is difficult to trace, is concerned with Alphanus, usually designated "the First," because there are several of the name. He was a Benedictine monk, distinguished as a literary man and known by his contemporaries as both poet and physician, who was afterwards raised to the Bishopric of Salerno. He had taught at Salerno in the Benedictine school there before becoming Bishop, and when exercising the highest ecclesiastical authority did much to encourage the development of Salerno. He states that medicine flourished in the town even in the ninth century, and there is an old chronicle published by De Renzi in his "Collectio Salernitana" in which it is said that the medical school was founded by four doctors—a Jewish Rabbi, Elinus; a Greek, Pontus; a Saracen, Adale; and the fourth a native of Salerno—each of whom lectured in his native language. This reads like a mythical legend that has formed around some real tradition of the coming of physicians from many countries. Puschmann in his "History of Medical Education" has suggested that the names are probably as much varied as the absolute

truth of the facts. Elinus, the Jew, is probably Elias or Eliseus, Adale is probably a corruption of Abdallah, and Pontus should be probably Gariopontus.

There was a hospital at Salerno that was somewhat famous as early as the first quarter of the ninth century. This was placed under the control of the Benedictines; and other infirmaries and charitable institutions, similarly under the care of religious orders, sprang up in Salerno to accommodate the patients that came. The practical character of the teaching at Salerno, as preserved for us in the writings of the school, would seem to argue that probably those who came to study medicine here were brought directly in contact with the patients, though we have no definite evidence of that fact.

The most interesting feature of the medical school at Salerno is undoubtedly the development of legal standards of medical education in connection with the school. Before the middle of the twelfth century Roger, King of the Two Sicilies, issued a decree according to which preliminary studies at the University were required as a preparation for the medical school, and four years of medical studies were made the minimum requirement for the degree of doctor in medicine, which was, however, as we have said, not a licence to practise, but only a certificate authorizing teaching. There seemed to have been, even thus early, some further state regulations with regard to practice. About the middle of the next century, however, there came, through a law of the Emperor Frederick II., a still further

evolution of legal standards for medical education and medical practice in the Two Sicilies. This law required that the student of medicine should have spent some years, probably the equivalent of our undergraduate training, in the university before studying medicine, and that he should then devote four years to medicine, after which, on proper examination, he might be given the degree of doctor—that is, teacher of medicine; but he must spend a further year of practice with a physician before he would be allowed to practise for himself.

This is such a high standard that, only that we have the actual wording of the law, it would seem almost impossible that it could have been evolved at this period in medical history. It actually represents the standard that we have climbed back to generally only during the past generation or two, and in the interval there have been many rather serious derogations from it. This law of the Emperor Frederick is, moreover, a pure drug law, regulating the sale of drugs and their purity, and inflicting condign punishment for substitution; in this regard also anticipating our most recent well-considered legislation. The penalty by which the druggist was fined all his movable goods for substitution, while the government inspector who permitted such substitution was put to death, would seem to us in the modern time to make the punishment eminently fit the crime. Almost needless to say, then, the law (see Appendix for full text) represents one of the most important documents in the history of medicine, particularly of medical education. The fee

regulation included in it shows that medicine was looked upon as a profession, and was paid accordingly.

From Salerno come many of the traditions of the conferring of degrees which are still used in a large number of modern medical schools. Before receiving his degree, the candidate had to take an oath, of which the following were the principal tenets: "Not to contradict the teaching of his college, not to teach what was false or lying, and not to receive fees from the poor even though they were offered; to commend the sacrament of penance to his patients, to make no dishonest agreement with the druggists, to administer no abortifacient drug to the pregnant, and to prescribe no medicament that was poisonous to human bodies."

It has sometimes been said that youths of tender age were admitted to the study of medicine at Salerno, and that many of them were given their degrees at the age of twenty-one. De Renzi's discussion would seem to show that the usual age of receiving the degree was twenty-five to twenty-seven. As medical students had to have three years of preparatory studies in literature and philosophy, it would seem that they must have been rather mature on their admission to the medical schools.

De Renzi tells us that the medical school of Salerno was of great importance not only for medical education, but it acquired sufficient means to extend its benefits over the entire city. Gifts were made of statues to the churches, and especially to the shrine of St. Matthew the Apostle, situated here; monuments were set up, inscriptions placed and ample donations made to the

various institutions of the city. The formal name of the medical school was *Almum et Hippocraticum Medicorum Collegium*. This is the first use that I know of the word *almum* in connection with a college, and may very well be the distant source of our term *alma mater*. The medical school was situated in the midst of an elevated valley which opened up on the mountain that dominates Salerno, and while enjoying very pure air must have been scarcely disturbed at all by the winds which can be blustery enough from the gulf. De Renzi says that in his time some of the remains could still be seen, though visitors to Salerno now come away very much disappointed because nothing of interest is left.

The most famous of the teachers at Salerno was Constantine Africanus, so called because he was born near Carthage. His life runs from the early part of the eleventh century to near its close, and he lived probably well beyond eighty years of age. Having studied medicine in his native town, he wandered through the East, became familiar with a number of Oriental languages, and studied the Arabian literature of science, and above all of medicine, very diligently. The Arabs, owing to their intimate contact with the Greeks in Asia Minor, had the Greek authors constantly before them, and Hippocrates and Galen have always roused men to do good work in medicine. Constantine seems not to have learned Greek, finding enough to satisfy him in the Arabic commentaries on the Greek authors, and probably confident, as all young men have ever been, that what his own time was doing must represent an advance over the Greek. He

brought back with him Arabian books and a thorough knowledge of Arabian medicine. When he settled down in Carthage he was accused of magical practices, his medical colleagues being apparently jealous of his success—at least, there is a tradition to that effect to account for his removal to Salerno, though the immediate reason seems to have been that his reputation attracted the attention of Duke Robert of Salerno, who invited him to become his physician.

After Constantine's time the principal textbooks of the school became, according to De Renzi, Hippocrates, Galen, and Avicenna. To these were added the *Antidotarium* of Mesue, and there were various compendiums of medical knowledge, quite as in our own time—one well known under the name of *Articella*. In surgery the principal textbook was the surgical works of the Four Masters of Salerno, which interestingly enough was the sort of combination work gathered from a series of masters that we are accustomed to see so frequently at the present day. De Renzi insists that there was much less Arabic influence at Salerno than is usually thought; and Gurlt more recently has emphasized, as we have said, the fact that the great textbooks of surgery which we have from Salerno contain not Arabisms, as might be expected from the traditions of Arabic influence that we hear so much of, but Græcisms, which show that here at Salerno there was a very early Renaissance, and the influence of Greek writers was felt even in the twelfth century.

Probably the best way to convey in brief form a good idea

of the teaching in medicine at Salerno is to quote the *Regimen Sanitatis Salernitanum*, the Code of Health of the School of Salernum, which for many centuries was popular in Europe, and was issued in many editions even after the invention of printing. Professor Ordronaux, Professor of Medical Jurisprudence in the law school of Columbia College (now Columbia University, New York), issued a translation of it in verse,[3] which gives a very good notion of the contents and the spirit and the mode of expression of the little volume.

The *Regimen* was written in the rhymed verses which were so familiar at this time. Many writers on the history of medicine have marvelled at this use of verse, but anyone who knows how many verse-makers there were in the twelfth and thirteenth centuries all over Europe will not be surprised. It used to be the custom to make little of these rhymed Latin verses of the Middle Ages, but it may be well to recall that in recent years a great change has come over the appreciation of the world of literature in their regard. The rhymed Latin hymns of the Church, especially the *Dies Iræ*, the *Stabat Mater*, and others, are now looked upon as representing some of the greatest poetry that ever was written. Professor Saintsbury of the University of Edinburgh has declared them the most wondrous wedding of sense and sound that the world has ever known. The *Regimen Sanitatis* of Salerno is of course no such poetry, mainly because its subject was commonplace and it could not rise to poetic

[3] Philadelphia: Lippincott, 1871.

heights. A good deal of the deprecation of its Latinity might well be spared, for most of the mistakes are undoubtedly due to copyists and interpolation. The verses not only rhyme at the end, but often there are internal sub-rhymes. This too was a very common custom among the hymn-writers, as the great sequence of Bernard of Morlaix, so well known through its translations in our time, as "Jerusalem the Golden" attests.

The *Regimen* was not written for physicians, but for popular information. It seems to have been a compilation of maxims of health from various professors of the Salernitan School. Nothing that I know shows more clearly the genuine knowledge of medicine, and the careful following of the first rule of medical practice *non nocere* to which Salerno had reached at this time, than the fact that this popular volume contained no recommendation of specific remedies, but only health rules for diet, air, exercise, and the like, many of which are as valuable in our time as they were in that, and very few of which have been entirely superseded—together with some general information as to simples, and a few details of medical knowledge that would give a convincing air to the compilation.

The book was dedicated to the King of the English, *Anglorum regi scribit schola tota Salerni*, and in the translation made by Professor Ordonaux begins as follows:

> If thou to health and vigour wouldst attain,
> Shun weighty cares—all anger deem profane,

From heavy suppers and much wine abstain.
Nor trivial count it, after pompous fare,
To rise from table and to take the air.
Shun idle, noonday slumber, nor delay
The urgent calls of Nature to obey.
These rules if thou wilt follow to the end,
Thy life to greater length thou mayst extend.[4]

Evidently it was rather easy to commit such rhymes to memory, and this accounts for the fact that we have many different versions of the *Regimen* and disputed readings of all kinds. These medieval hygienists believed very much in early rising, cold water, thorough cleansing, exercise in the open air, yet without sudden cooling afterwards. The lines on morning hygiene seem worth while giving in Ordonaux's translation.

At early dawn, when first from bed you rise,
Wash, in cold water, both your hands and eyes.
With brush and comb then cleanse your teeth and hair,
And thus refreshed, your limbs outstretch with care.
Such things restore the weary, o'ertasked brain;
And to all parts ensure a wholesome gain.
Fresh from the bath, get warm. Rest after food,
Or walk, as seems most suited to your mood.
But in whate'er engaged, or sport, or feat,
Cool not too soon the body when in heat.

[4] The Latin lines run thus:

The Salernitan writers were not believers in noonday sleep, though one might have expected that the tradition of the *siesta* in Italy had been already established. They insist that it makes one feel worse rather than better to break the day by a sleep at noonday.

> Let noontide sleep be brief, or none at all;
> Else stupor, headache, fever, rheums, will fall
> On him who yields to noontide's drowsy call.

They believed in light suppers—

> Great suppers will the stomach's peace impair;
> Wouldst lightly rest, curtail thine evening fare.

With regard to the interval between meals, the Salernitan rule was, wait until your stomach is surely empty:

> Eat not again till thou dost certain feel
> Thy stomach freed of all its previous meal.
> This mayst thou know from hunger's teasing call,
> Or mouth that waters—surest sign of all.

Pure air and sunlight were favourite tonics at Salerno—

> Let air you breathe be sunny, clear, and light,
> Free from disease or cess-pool's fetted blight.

Taking "a hair of the dog that bit you" was, however, a maxim with Salernitans for the cure of potation headaches.

> Art sick from vinous surfeiting at night?
> Repeat the dose at morn, 'twill set thee right.

The tradition with regard to the difficulty of the digestion of pork, which we are trying to combat in the modern time, had already been established at Salerno. The digestibility of pork could, however, be improved by good wine.

> Inferior far to lamb is flesh of swine,
> Unqualified by gen'rous draughts of wine;
> But add the wine, and lo! you'll quickly find
> In them both food and medicine combined.

Milk for consumptives was a favourite recommendation. The tradition had come down from very old times, and Galen insisted that fresh air and milk and eggs was the best possible treatment for consumption. The Salernitan physicians recommended various kinds of milk, goat's, camel's, ass's, and sheep's milk as well as cow's. It is probable, as I pointed out in my "Psychotherapy," that the mental influence of taking some one of the unusual forms of milk did a good deal to produce a favourable reaction in consumptives, who are so prone to be affected favourably by unusual remedies. The *Regimen* warned, however, that milk will not be good if it produces headache or

if there is fever. Apparently some patients had been seen with the idiosyncrasy for milk, and the tendency to constipation and disturbance after it which have been noted also in the modern time.

Goat's milk and camel's, as by all is known,

Конец ознакомительного фрагмента.