The eight books On Medicine of A. Cornelius Celsus are one of a number of treatises on technical matters which have survived from the Rome of the first century A.D.. Written in Latin c. A.D. 30 they originally formed one section of an encyclopedia; the preceding section was On Agriculture. Because of its early date and its comprehensive treatment of the subject the work is of unique importance for the medical historian, and especially for the historian of medical terminology: many technical terms in use today found their start in life in the pages of these eight books.

This article reviews the structure and contents of the work as a whole. On Medicine is a specialist work, whose appeal is to the specialist reader. It contains passages which the layman finds boring, and sometimes revolting. But there are other passages which throw an interesting light on common life in Celsus’ time, from a standpoint which no other author takes; and the extensive quotations in the present article make available some of these passages to the reader who has neither the time nor the inclination to read the whole of the treatise.

There is an overall division of the work into the three parts indicated in a passage from the Prooemium:

During this period medicine was divided into three parts: treatment by regimen, treatment by drugs and treatment by hand. The Greek names for these are respectively dietetics, pharmaceutics and surgery. The Greek words ‘dietetics’ and ‘pharmaceutics’ are actually adjectives with technē ‘art’ understood (‘the dietetic/pharmaceutic art’); ‘surgery’ is cheirourgia, lit. ‘hand-working’.

The commencement of the second and third sections is clearly indicated in the text:

I have dealt with those bodily ills to which a consideration of regimen is most beneficial; now I must pass to that branch of medicine which fights them rather by means of drugs.

That the third branch of medicine is that which treats by hand, as I have indicated earlier, is well known to everyone. This branch does not indeed ignore drugs or a consideration of regimen, but does most of the

1. All references in this article to Celsus’ De Medicina are to the text as printed in the Loeb Classical Library edition with English translation by W.G. Spencer. The text follows that of F. Marx (Teubner 1915). All translations are my own, though based at times on Spencer.
2. Pro. 9.
3. i.e. 4th to 3rd centuries B.C.
work by hand.\footnote{The formula which marks the beginning of the first section will not, however, be found at the beginning of Book I; it occurs much farther back, at Pro. 12:}

Since of the three branches of medicine the most difficult, as well as the most famous, is that which treats diseases, I must speak of this first of all. Dietetics is here identified with the treatment of morbi 'diseases', an identification which recurs in a passage from the opening of Book VII.\footnote{Hence the Prooemium is actually composed of two prefaces, one to De Medicina as a whole (chapters 1-11) and one to the first section of the work, viz. dietetics (12-75).} This means that, for Celsus, the treatment of diseases is the special province of dietetics; and it appears elsewhere\footnote{The passage runs: 'This branch [i.e. surgery] does not indeed ignore drugs or a consideration of regimen, but does most of the work by hand; and its effect is the most apparent of all the branches of medicine. For in the case of diseases, since luck plays a large part, and the same things at one time bring health and at another are completely ineffective, there is room for uncertainty as to whether recovery is due to the treatment or to one's constitution or to luck. Again, in cases where we rely largely on drugs, although progress is more apparent, yet it is clear that often health is either sought in vain with their aid or achieved without them; as can be observed also in the case of eyes, which sometimes, after being plagued by doctors for a long time, recover without their help. But in that branch which treats by hand it is clear that all progress derives chiefly from this (though help may be gained from other sources).'} that the special province of pharmaceutics and surgery is the treatment of ulcera et uulnera 'sores and wounds'.\footnote{This is not to deny that the branches may overlap: compare the passage referred to in note 5 above.}

Part I: Regimen.

The Latin word is uictus, translating Greek diaita. This Greek word, from which comes our 'diet', appears in the titles of three treatises from the Hippocratic corpus: Peri diaitēs 'On Regimen', Peri diaitēs hygieines 'On a Healthy Regimen' and Peri diaitēs oxēon 'On the Regimen of Acute Diseases'. Diaita is an abstract noun meaning something like 'way of life': the title 'On a Healthy Regimen' might be paraphrased 'What a healthy man should do to stay healthy' and 'On the Regimen of Acute Diseases' 'What a sick man should do to regain health'. An important part of 'what he should do' is 'what he should eat', which is how the word 'diet' got its 5. VII Pro. 1.
modern sense; and the treatise *Peri diaitēs* shows that already in Hippocrates's time the food aspect tended to be emphasised above other aspects, for the purpose of that treatise is to argue that exercise is of equal importance with food in *diaita*:

Eating will not keep a man healthy by itself: he must also take exercise. For food and exercise, though having opposite effects, yet work together to produce health: it is the nature of exercise to use up material, but of food and drink to restore what has been lost.10

*Vic tus* in Latin has both the wider ('way of life') and the narrower ('diet') sense of *diaita*. As the title chosen by Celsus for the first branch of medicine it has the wider sense, which is why I have preferred 'regimen' to 'diet' as a translation of it.11

Celsus' discussion of the treatment of diseases by means of regimen is in four main parts which follow a logical order. First there is a brief historical introduction (Pro. 12-75), then a section on health rules for the healthy (I), then one on the signs of approaching illness (II 1-8), and lastly (and much the longest) one on the treatment of illnesses (II 9 to IV 32).

The historical section begins as follows:

Since of the three branches of medicine the most difficult, as well as the most famous, is that which treats diseases, I must speak of this first of all. And since in this branch there is a basic difference of opinion, in that some assert that knowledge derived from practical experience is all that is necessary while others claim that the practical approach is valid only if based on a theoretical study of the body and of nature in general, I must indicate the arguments on both sides, so that it will be easier then for me to present my own opinion.12

Celsus deals with the latter group first, calling them *ii qui rationalem medicinam profitentur* 'those who assert that medicine is an art based on theory';13 after his time they would be known as *Dogmatici*. One of the theoretical studies on which this school insisted was a study of anatomy:

Furthermore, since pains and various types of diseases rise in the internal organs of the human body, they consider that no-one can apply remedies for these who is ignorant of the organs themselves. 'It is therefore essential,' they say, 'that dead bodies should be cut open and their internal organs examined. By far the best method, however, was that of Herophilus and Erasistratus,14 who were allowed by the authorities to take guilty men from the prison and cut them open alive.

. . . There is no cruelty involved (as many assert) in seeking remedies for the innocent throughout the ages from the execution of the guilty, and a minority of the guilty at that'.15

10. I 2.
11. The medical use of the word *regimen* is much later than Celsus' time.
14. Famous Alexandrian physicians of the 4th-3rd centuries B.C.
15. Pro. 23ff.
Celsus refers to the opposing school by their name *Empirici*, and portrays their school of thought as a reaction against the theoretical studies of the Dogmatics. It is they who regard vivisection as cruel; here is part of what they say about it:

'In fact it is the merest stupidity to imagine that any portion of a living man will look the same when he is dying, much less when he is already dead. Take the belly for instance: this is a less vital area, and can be cut without killing him; but let the knife penetrate to the organs higher up and cut through the diaphragm (that is, the membrane that divides the upper from the lower organs) and he immediately dies. So it is a dead man after all whose entrails are bared to the medical murderer's view, and hence their appearance is as in a dead, and not a living, body. In fact, all that the physician achieves is to slaughter a man instead of finding out what our organs look like in life. ... The fact that death produces an alteration in most of the body has one other result: it renders superfluous even the dissection of the dead which, though not cruel, is a disgusting business. Everything that can be discovered about the living body is revealed in the course of actual treatment.'

In their view a physician will gain sufficient anatomical knowledge in the course of treating wounds on the battlefield or in the arena.

Celsus points out that both these schools of thought have something to commend them:

'It is true that the greatest advances in the theory of treatment arise from practical experience. ... Yet medicine needs theory. ...' Then he devotes some pages to a third school of thought, whose members, he says, define medicine 'in such a way that it becomes a sort of highway which they call “method”;' later they would be called *Methodi*. He does not give their views on dissection and vivisection; their main characteristic as reported by him is their classification of diseases:

'There are [say the *Methodi*] three main types of disease: the constricting type, where the patient excretes too little, the loosening type, where he excretes too much, and a mixture of these, where he excretes too little from one part and too much from another. Each of these three types may be subdivided into acute and chronic diseases; and each of the resultant six types runs a definite course consisting of three stages: the stage of increase, the stage of pause at the climax, and the stage of abatement.'

16. Pro. 27.
17. Celsus uses the Latin name *transuersum saeptum*, and adds a note: 'the Greeks call it *diaphragma*'.
18. *in conspectum latrocinantis medici*.
21. Pro. 57. Celsus' remark about the highway is a pun on the root of the Greek noun *methodos*, lit. 'system'.
22. Pro. 55.
Celsus is critical of this school, and does not follow their classification in his work.

In a brief paragraph of summing-up at the end of this historical introduction he writes:

To return, then, to my own views, I consider that the art of medicine ought to be based on theory . . . . To cut open the bodies of living men is both cruel and unnecessary, but it is necessary for students to dissect the dead: for they have to find out about position and arrangement, which they can do better from a cadaver than from a living, wounded man.23

Book I concerns health rules for the healthy. As far as Celsus is concerned, every man is either sanus 'well' or aeger 'ill'. Most of the material on regimen will, naturally enough, be aimed at the aegri; but he begins with a comparatively brief word to the sani. Within this section of the community there are, it appears, two types: the firmi 'strong', who are not prone to illness, and the imbecilli 'weak', who are;24 and within the group of the imbecilli there are again two types: those whose proneness to illness is a general one, and those who are prone to illness in some particular part of the body (e.g. those who are prone to headaches).

To the man who is fortunate enough to be both sanus and firmus Celsus has little to say beyond a few general suggestions about conduct of life (diaita/iictus in its widest sense); as he remarks in the opening sentence:

A healthy man whose constitution is sound and who is his own master should not bind himself to any set of rules and should have no need of either a physician or a masseur.25

Variety, says Celsus, should be the keynote of his existence;26 he should take plenty of exercise, but not carry it to the lengths that professional athletes do.27

Turning to the imbecilli Celsus begins:

The weak, whose number includes the majority of city-dwellers and almost all devotees of literature, must take greater precautions.28

This reference to devotees of literature recalls a passage from the preface to the whole work, where, after glancing at the Homeric age, he writes:

[Because the standard of health was generally high,] there were no distinguished practitioners of medicine in succession to those whom I have just mentioned;29 and this state of affairs continued until literary studies began to be pursued with greater zeal, such studies being outstan-

23. Pro. 74.
24. In some passages 'fit' and 'unfit' are reasonable translations for firmi and imbecilli respectively.
25. I 1 1.
26. hunc oportet uarium habere uitae genus: I 1 1.
27. I 1 3.
28. I 2 1.
29. Podalirius and Machaon.
dingly good for the mind but bad for the body. At first, then, the science of healing was regarded as a branch of philosophy, which means that the treatment of diseases and the study of the natural world were founded by the same men: for obviously the ones who most needed this treatment were they whose bodily strength had been sapped by lack of exercise and lack of sleep. This is why many philosophers were, according to tradition, skilled in the art of medicine, the most famous of them being Pythagoras, Empedocles and Democritus.\(^30\)

We have already noted the important part played by exercise in *diaita*; the idea that those in sedentary occupations are worse off for the lack of it is not a modern discovery. Celsus gives some detailed advice on exercise in a passage which begins:

The body is suitably exercised by reading aloud, weapons drill, ball games, running and walking. This last should not be confined to level ground: going up and down hill varies the movement of the body, and this is beneficial except for the very unfit [imbecilli].\(^31\)

The precepts which follow are so varied in nature that it is impossible to summarise them (I 2-3); and the same may be said of the following sections, in which advice is given to those who have a weakness in some specific part of the body. The advice to someone prone to headaches includes the following:

He should not write, read or argue out loud, especially after dinner; indeed, after dinner even thinking is not particularly safe for him.\(^32\)

Among the advice to those who have digestive problems we read:

Drink not water but warm wine on an empty stomach.\(^33\)

Readers of the New Testament will be reminded of a passage from I Timothy:

No longer drink only water, but use a little wine for the sake of your stomach and your frequent ailments.\(^34\)

The health rules for the healthy are rounded off by advice to a man caught in an epidemic who has not yet contracted the disease and wants to remain unaffected; Celsus points out very rightly that the best thing he can do is go and take a holiday in some distant area.\(^35\)

With Book II we begin the section on signs;\(^36\) but before Celsus considers this topic he writes a somewhat lengthy introduction on such matters as the seasons of the year and the different types of weather and describes the type of illness most likely to strike under each. This is how he describes the

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30. Pro. 5-7.
32. I 4 5.
33. I 8 1.
34. I Timothy 5:23; RSV.
35. I 10 1.
36. *Signa* or *notae*: the words appear to be synonymous in this sense.
effects of the south wind:

The south wind blunts the hearing, dulls the senses, causes headache, loosens the bowels and makes the whole body sluggish moist and languid. 37

This is a very adequate description of the effects of muggy summer weather.

The signs begin at II 2 1:

As a prelude to illness, as I said earlier, certain signs arise which have one thing in common: an alteration in the body’s accustomed state. Hence it may be a sign of illness either that a fat person has become thinner or a thin person fatter. The patient is not yet ill, but the signs suggest that he soon will be. After the illness has struck, there follows a second set of signs, which tell the physician whether or not the patient will recover: signs that he is not in danger and that the illness is only a mild one are given in II 3, those that show a serious illness to come in II 4. After detailing the latter Celsus remarks:

After such signs as these one must pray that the illness will be a long one; for that is the only alternative to the patient’s death. 38

Further signs follow which suggest that, though the illness will be long, the patient will eventually recover, 39 and these are followed by the signs of approaching death. 40 Then comes a brief digression which is worth quoting in full:

I anticipate that someone will question me as follows: ‘If the signs of impending death are infallible, how is it that patients given up by their physicians occasionally recover? — some are rumoured to have come to life again at their own funeral! Furthermore, what about the justly famous Democritus? — he was so far from accepting that there are some infallible signs of approaching death that he asserted that even the signs on which physicians rely to show that life is extinct are fallible.’

In reply to this I will resist the temptation to say that whereas inexperienced practitioners may be deceived by certain somewhat similar signs skilled ones never are, that Asclepiades once chanced upon a funeral and realised that the body was still alive, and that the faults of the practitioner cannot be imputed to the art as a whole; I will content myself with the milder observation that the reasoned guess is an integral part of the art of medicine and that the theory of the reasoned guess 41 is such that, though more often it is correct, yet sometimes it is wrong. If some sign should mislead the physician once in a thousand cases he does not reject it as a sign, for it is right in innumerable instances. This applies not only to signs of illness but also to signs of returning health — for hope is sometimes frustrated in the same way and death takes a patient for whom the physician had no fears. Every healing discovery that has

37. II 1 11.
38. II 5 1.
39. II 5.
40. II 6 1-12.
41. coniectura.
been made occasionally causes a change for the worse. Human frailty cannot avoid this when there are so many different types of constitution. But Medicine can nonetheless be trusted, for it benefits most sick people most of the time.\textsuperscript{42}

The italicised phrase represents the Latin \textit{coniecturalem artem esse medicinam} lit. 'that medicine is a conjectural art.' By this Celsus means that a physician’s pronouncements about the outcome of an illness or a course of treatment are always to some extent guesses, because the variables involved (including the patient’s own constitution) are sufficient to make absolute certainty unattainable.

There follows a lengthy section\textsuperscript{43} on the signs involved in particular types of disease, and at II 91 we find the formula of transition to the next major topic:

\begin{quote}
Having recognised the signs which may either console us with hope or terrify us with fear, we must pass to the treatments of diseases.\textsuperscript{44}
\end{quote}

This topic occupies all the rest of the section on regimen, down to the end of Book IV.

Treatments are basically of two types: general treatments (\textit{communes}), applicable in all types of illness, and specific (\textit{propriae}), applicable to one type only.\textsuperscript{45} Celsus deals first with the general treatments, and starts with some observations on how they operate:

\begin{quote}
Everything which promotes bodily health\textsuperscript{46} either removes matter or supplies it, either collects it or disperses it, either cools or heats, and likewise either hardens or softens; and some things operate not merely in one way but in two ways which do not cancel each other out.\textsuperscript{47}
\end{quote}

This passage defines the order in which he discusses the general treatments. Methods of removing matter are considered in II 10-17: they include blood-letting,\textsuperscript{48} cupping\textsuperscript{49} (this is a method of withdrawing material such as pus by a form of suction), purging\textsuperscript{50} (this involves what we would call laxatives, but Celsus advises against the use of drugs for this purpose and prefers the injection of water or certain other liquids into the rectum — the general Latin phrase for this process is \textit{aluum ducere}), vomiting\textsuperscript{51} (i.e. induced), massage,\textsuperscript{52} rocking\textsuperscript{53} (the Latin term is \textit{gestatio}, and the treatment involves

\textsuperscript{42.} II 6 13ff.  
\textsuperscript{43.} II 7-8.  
\textsuperscript{44.} \textit{curationes morborum}.  
\textsuperscript{45.} The division general/specific is used in other sections of the work as well.  
\textsuperscript{46.} \textit{omne auxilium corporis}.  
\textsuperscript{47.} II 9 2.  
\textsuperscript{48.} II 10.  
\textsuperscript{49.} II 11.  
\textsuperscript{50.} II 12.  
\textsuperscript{51.} II 13.  
\textsuperscript{52.} II 14; in this section Celsus credits Asclepiades with greatly extending the art of massage.  
\textsuperscript{53.} II 15.
placing the patient in a sort of hammock so that he may be rocked gently from side to side), fasting or dieting\(^{54}\) (these are two varieties of *abstinentia*) and finally sweating\(^{55}\) (carried out, of course, in the hot bath).

The next section, on ways of supplying material, amounts to an ancient nutritional guide. It begins:

Now that I have dealt with those things which do good by removing matter, I must pass to those which nourish, i.e. food and drink. These not only fight all types of disease but are a general safeguard of health; hence it is relevant to be familiar with the characteristics of all kinds, firstly so that the healthy may know how to use them, and secondly so that when we come to deal with the treatment of diseases\(^{56}\) we may set down the types of food and drink which must be taken without having to name them individually.\(^{57}\)

There are three main types, differing in the amount of nourishment they afford: they are termed *ualentissimi* (‘most nourishing’, lit. ‘strongest’\(^{58}\)), *medii* (‘of average nourishment’, lit. ‘medium’\(^{59}\)) and *imbecilli* (‘affording little nourishment’, lit. ‘weak’\(^{60}\)). In the first category come most types of meat, animal products such as cheese and all grain products; in the second fish, fowl and root vegetables; in the third other types of vegetable (described by Celsus as ‘all vegetable stalks and whatever grows on a stalk’), orchard fruits and shellfish. There follows a more detailed survey which points out that within each category some foods are more nourishing than others. Drinks are similarly classified,\(^{61}\) water being the weakest and milk among the strongest. Other systems of classification follow,\(^{62}\) and at the end of Book II Celsus runs rapidly through the other general treatments which he listed in II 9 2.

Books III and IV contain the treatments of individual diseases, and Celsus begins\(^{63}\) by discussing the division into acute (\*acuti*: the Greek word was *oxeis*) and chronic (Greek *chronikoi*: Celsus’ word is *longi*) diseases. Then for convenience he makes his customary division into conditions affecting the whole body\(^{64}\) and conditions affecting only part of the body.\(^{65}\)

The conditions affecting the whole of the body begin with the fevers (\*febræ*), the discussion of which occupies many pages.\(^{66}\) There is a primary

\(^{54}\) II 16.

\(^{55}\) II 17.

\(^{56}\) morborum curationes, sc. propriae.

\(^{57}\) II 18 1.

\(^{58}\) They are listed in II 18 2.

\(^{59}\) They are listed in II 18 3.

\(^{60}\) They are listed in II 18 3 ad fin.

\(^{61}\) II 18 11-13.

\(^{62}\) II 18 19-32.

\(^{63}\) III 1.

\(^{64}\) Book III.

\(^{65}\) Book IV.

\(^{66}\) III 3-17.
classification according to the frequency with which the bouts of shivering break out:67 if daily, the fever is *cotidiana*, if every other day, it is *tertiana*, if every third day, it is *quartana*.68 But there are different types within both the cotidian and the tertian groups; the tertian group includes a type known by the Greek name *hemitritaion*.69

Celsus begins his discussion of the treatment of fevers by quoting a famous maxim of Asclepiades:

*The duty of a physician is to treat safely, speedily and pleasantly.*70 On this Celsus comments:

*That is what we aim at; but to overdo the speed and the pleasure is often dangerous.*71

In the treatment of fevers the ancients made use of drugs to promote digestion; following Asclepiades, Celsus is eager to reduce the use of drugs as far as possible.72 He writes:

*The best drug is food given at the right moment.*73 But when is the right moment? This question provokes a lengthy discussion, including criticism of some Hippocratic notions concerning what were called ‘critical days’. This doctrine held that there were certain specific days of the illness on which the patient’s fate was decided;74 Celsus, again following Asclepiades, repudiates this.75 As to the giving of food, no hard-and-fast rule can be laid down:

*It depends upon the nature of the disease, the patient’s constitution, the climate, the patient’s age and the time of year: in such variable matters there can be no fixed rule.*76

Special instructions concerning the taking of food are given in the discussions of individual types of fevers which follow.

One thing the physician will always do in such cases is feel the patient’s pulse, and Celsus’ advice on this makes interesting reading:

*Bathing, exercise, fear, anger and any other state of mind usually makes the pulse faster; indeed, when the physician comes for the first time, the very anxiety of the patient as he wonders what the physician will think of his condition may disturb his pulse. That being so,* the

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67. Latin lexicographers are grateful for the definitions of *frigus* and *horror* at III 3 3.
68. Notice the inclusive reckoning in the Latin names, made clear in Celsus’ definition of the quartan fever, which states that there are two free days between the bouts. He also states that the cycle of the tertian is 48 hours.
69. Compare Hippocrates: *Epidemics* I 2. This fever has a two-day cycle like the tertian, but the shivering does not remit entirely at any point in the cycle.
70. III 4 1.
71. ib.
72. III 4 2.
73. III 4 6.
74. III 4 11.
75. III 4 12.
76. III 4 7.
experienced physician does not grab the patient’s arm the moment he arrives, but first of all sits down and asks him cheerfully how he is; if the patient is afraid of something he calms his fear with pleasant conversation; and only after that does he stretch out his hand towards the patient. If the mere sight of the physician can excite the pulse, how readily will a thousand other things disturb it?

Further on Celsus considers fevers complicated by inflammation and pain in the chest, and it is here that he gives his classic definition of inflammation:

The signs of inflammation are four: redness and swelling with heat and pain.

Following the discussion of fevers are sections dealing with conditions which may result from fevers. The first of these is insanity. We observe here the ancient equivalent of a straitjacket (uniucle, lit. ‘bonds’) and the use of music (symphoniae) as a therapy. But passages like the following make sad reading:

A patient who has lost all power of constructive thought is best treated by certain tortures. When he says or does anything wrong he should be coerced by hunger, bonds or blows. He should be forced to concentrate and to learn something and remember it; thus fear will gradually compel him to think constructively about what he should do.

Other conditions, not all of them now identifiable, are dealt with in the sections that follow: among them is a clear reference to pulmonary tuberculosis:

This originates in the head, and thence drips into the lung; then ulceration begins, and after this a mild fever which dies down but then recurs. There is frequent coughing with spitting of pus and sometimes blood.

Celsus gives this condition its Greek name phthisis (lit. ‘wasting, consumption’); the Latin equivalent would be tabes, which however Celsus uses as a blanket term to include other wasting diseases as well. Phthisis, he says, is the most dangerous of these. Its treatment is detailed in III 22 8ff; Celsus particularly recommends a long sea voyage with complete change of air. Following this there is a section on epilepsy, called by its untranslatable

77. probabili sermon e.
78. III 6 6.
79. III 10 3.
80. insania: III 18.
81. III 18 4.
82. III 18 10.
83. consilium.
84. III 18 21.
85. III 22 3.
86. III 22.
87. III 23.
Latin name *morbus comitialis*; then comes one on jaundice, for which Celsus records two names: *morbus arcuatus* ‘the rainbow disease’ and *morbus regius* ‘the royal disease’. Book III ends with *apoplexia*, which we would describe as a stroke, and the paralysis which may result from it: Celsus translates the Greek word *paralysis* by means of the phrase *resolutio nerorum* lit. ‘a slackening of the sinews’. He describes this as ‘a frequent disorder everywhere’.

In Book IV are described conditions which affect only certain parts of the body. The book begins with a passage, invaluable to the historian of anatomy, in which Celsus describes the internal organs of the body; there is a parallel description of the skeleton at the beginning of Book VIII. The changes of meaning in some words are particularly interesting; for instance, the word *stomachus* refers, not to what we designate as the stomach, but to the food-pipe or oesophagus, while the word for stomach is *ventriculus*.

The diseases dealt with in the rest of the book include asthma and cholera; but the only one which will engage our attention, and that very briefly, is the common cold. Here is Celsus’ description of its effects:

> It blocks up the nostrils, renders the voice hoarse, and causes a dry cough. In the same affliction the saliva is salt, the ears ring, the bloodvessels in the head throb and the urine is turbid.

The Latin name for the condition is *grauedo* lit. ‘heaviness’ (i.e. of the head). Later Celsus writes of it:

> If we take care of ourselves for two days, or certainly for three, this complaint is nearly always relieved.

The measures for taking care of oneself are detailed in IV 5 8; they include wrapping wool around the throat.

There follows a brief consideration of diseases involving pain in the joints; in the hands and feet these include *cheiragra* and *podagra*, two Greek terms whose meaning includes gout. Book IV, and the treatment of diseases, ends on an optimistic note with advice about convalescence, and the last sentence contains an echo of the first sentence of Book I:

> The patient should therefore only gradually abandon the physician’s prescription and resume control of his own life.

The wheel has gone full circle, and he is once again his own master.

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88. Its name refers to the fact that meetings of the *comitia*, the Roman voting assemblies, were immediately adjourned if anyone attending them suffered an epileptic seizure (so Festus; cf. Isid. *Orig.* IV 7 7). Its symptoms and cause so puzzled the Greek physicians that it was regarded as a divine manifestation: the Greeks called it ‘the sacred disease’ (the abstract nouns *epitepsis* and *epitepsia*, both lit. ‘seizure’, occur very rarely in the Hippocratic corpus).

89. III 24.
90. III 27 1A.
91. IV 8 1.
92. IV 18 1.
93. IV 5 2.
94. IV 5 3.
95. IV 31.
Part II: Drugs

In Greek the word *pharmakon* ‘drug’ is used both in the good (‘medicine’) and in the bad (‘poison’) sense. Aulus Gellius tells us that Latin *uenenum* was originally thus ambivalent; but already in Cicero’s time it had become specialised to the bad sense ‘poison’, while the good sense ‘medicine’ was the province of the neuter noun *medicamentum*. Celsus follows this Ciceronian usage, and the second section of his treatise is about *medicamenta*.

The Latin verb for ‘to take (medicine)’ is *sumere*, but in *On Medicine* it nearly always has food or drink and not drugs as its direct object. Celsus, in fact, follows the lead of Asclepiades which he describes in the preface to Book V:

On the other hand Asclepiades, with some justification, avoided using them for the most part: since nearly all drugs harm the digestion and contain injurious juices, he transferred all his treatment for preference to a consideration of regimen itself.

Celsus does not favour the total abolition of the internal use of drugs, but following Asclepiades he reduces it to a minimum; and hence the great majority of drugs and preparations in the second part of his treatise are external applications for use with sores and wounds (*ulcera et ulcerata*).

The material on drugs occupies Books V and VI, and is in two main parts: a lengthy catalogue of drugs and their properties, and a list of bodily conditions in which drugs are used.

The catalogue of drugs itself has two main sections: in the first are listed simple drugs with only one constituent, and in the other mixtures (*compositiones*). The simples are classified according to their effect: those which stop bleeding, reduce inflammation, burn the skin and so on. Much curious vocabulary is involved in the lists of substances and plants, on the English as well as the Latin pages of the Loeb edition.

The compounds are classified by type, the three main types being *malagma*, *emplastra* and *pastilli*. At V 17 2 Celsus tells us that *malagma*
are normally made from vegetable matter and are applied to unbroken skin; the other two are normally made from mineral matter and may be applied when the skin is broken. In an emplastrum at least one of the constituents is liquid; in a pastillus they are all dry, but are mixed with a little liquid when the time comes to apply them. Furthermore, emplastrum imponitur, pastillus intinitur\(^\text{110}\) ‘an emplastrum is laid on, a pastillus is smeared on’. The Loeb translations ‘poultice’ (malagma), ‘plaster’ (emplastrum) and ‘pastil’ (pastillus) seem as good as any. For a black eye one uses a malagma,\(^\text{111}\), to stop bleeding from a wound an emplastrum,\(^\text{112}\) and to agglutinate a wound either an emplastrum\(^\text{113}\) or a pastillus\(^\text{114}\). The pastilli are much fewer in number than the other two.\(^\text{115}\)

Many of the compounds mentioned in these and in later sections of the work have what would now be called trade names. Over sixty use the name of their discoverer, either in the genitive case (Andreae malagma: V 18 7\(^\text{116}\)) or in the genitive with no governing noun (Sosagorae: V 18 29) or in various phrases (malagma quod ad Polyarchum auctorem refertur ‘the poultice called after its founder Polyarchus’: V 18 8). Others bear names derived from their place of origin,\(^\text{117}\) their physical appearance,\(^\text{118}\) their effect\(^\text{119}\) or their most conspicuous ingredient.\(^\text{120}\) We must mention also tetrapharmacum ‘the four-drug (plaster)’,\(^\text{121}\) which is referred to more often than any other, and enneapharmacum ‘the nine-drug (plaster)’.\(^\text{122}\) The use of names which will be good for publicity purposes is also in evidence. When a certain Zopyrus composed an antidote for one of the Ptolemies he had the brilliant idea of naming it ambrosia, the Greek word for immortality.\(^\text{123}\) Eye ointments especially were boosted in this way, and Celsus records two examples. One is called zmilion;\(^\text{124}\) this is from a Greek word meaning ‘scalpel’, and was presumably intended to suggest that the concoction cleared up ulcers with the speed and precision of a surgeon’s knife. The other is called, rather obscurely, achariston\(^\text{125}\) ‘ungrateful’; Galen’s explanation of the name\(^\text{126}\) is

110. V 17 2C.
111. V 18 24.
112. V 19 1A.
113. V 19 1A.
114. V 20 1A.
115. Pastillus is also used (e.g. by Horace at Satires I 2 27) to denote a lozenge for oral use. The pastilli which were used for wounds, being made entirely of dry ingredients, were presumably stored in pellet form, and then crumbled and mixed with liquid before being smeared on. In their pellet form they would look like lozenges.
116. Compare ‘Beecham’s Little Liver Pills’.
117. ‘Attic’ V 18 19; ‘Coan’ V 19 2.
118. elephantine ‘ivory-white’ V 19 24; tephron ‘ash-grey’ VI 6 7.
119. rhaptousa ‘the stitcher’ V 19 6; sphragis ‘the seal’ V 20 2.
120. Greek phrases with dia, such as dia tou keratos ‘using horn’ VI 6 16C.
121. Ingredients given at V 19 9.
122. Ingredients given at V 19 10.
123. V 23 2.
124. VI 6 18.
125. VI 6 6.
that the ointment was supposed to cure the patient’s ophthalmia so quickly that he would not have time to feel gratitude to the physician who applied it.

Also noteworthy is the reference to the antidote of Mithridates. Various authors give varying accounts of the famous antidote with which he dosed himself daily to build up immunity to poisoning, and the list of thirty-six ingredients which Celsus gives is not exactly paralleled elsewhere.

There are also a few other types of mixture of less importance; the only one we need notice is the catapotia ‘pills’ of V 25. These are, of course, for internal use. First come some pain-killers, of which Celsus writes:

Those which relieve pain through sleep are called ‘anodynes’; their use except in cases of overwhelming necessity is harmful, for they are composed of powerful drugs which harm the digestion.

The significant ingredient in most is poppy-tears, which we now know to contain opium. There are other catapotia for coughs and sore throats; but in general it is clear that Celsus is trying to keep the internal use of drugs to a minimum. The section on pills closes the catalogue of drugs.

The next section of the work begins as follows:

Now that I have set out the properties of drugs, I shall set out the ways in which the body may suffer harm. These are five in number: when something inflicts damage from without (as in the case of wounds); when something becomes corrupt within itself (as in the case of cancer); when something grows within (like a stone in the bladder); when something grows bigger (like a vein which swells and becomes varicose); and when something is missing (as when some part is mutilated).

The last three of these require surgery and are dealt with in the surgical portion of the treatise. The first two are dealt with in the remainder of Book V and the whole of Book VI.

Wounds come first, and Celsus begins as follows:

In dealing with wounds the physician must above all know which are incurable, which are difficult to treat and which are easier. It is the mark of a prudent man, firstly, not to touch someone who cannot be saved and not to risk appearing to have killed someone whose death was inevitable, and secondly, when there is grave fear but all hope is not gone, to point out to the victim’s relatives that hope is beset by difficulty — for he thus ensures that, if his art must yield to the injury, he should

127. V 23 3.
128. The fame of the antidote lived on despite the uncertainty over its composition: it is referred to e.g. by Juvenal at Satires XIV 252.
129. V 25 1. ‘Digestion’ is stomachus: see back.
130. For the meaning of this word see later.
131. V 26 1.
132. The ut of eius ut occisi, which has puzzled commentators, merely indicates that the physician had not really killed the patient. Vt is for uelut.
not appear to have been ignorant or mistaken. This is a matter of prudence; but to exaggerate a small matter in order to enhance the achievement is the action of a clown.\textsuperscript{133} It is right to bind oneself by an admission that the case is a simple one, thus forcing oneself to take greater precautions lest a condition which is slight in itself should become greater through the negligence of the physician.\textsuperscript{134}

There follows a section indicating which wounds are likely to be fatal and which very severe, and then one detailing signs by which the physician may know that the wound has penetrated to and damaged some internal organ. The actual treatment of the wound begins at V 26 21A, and the account of a successful treatment runs from here to the end of 30C.

The first two things which the physician must do are stop the bleeding and reduce inflammation. The procedure for stopping bleeding has some similarity to modern first aid:

The wound should be filled with dry lint, then a sponge wrung out in cold water should be placed upon it and pressed down with the hand.\textsuperscript{135} The closing of blood vessels by cautery is also mentioned,\textsuperscript{136} but there is no reference to anything like a tourniquet. But the bleeding should not be stopped too quickly, for it is itself the best safeguard against inflammation.\textsuperscript{137}

Next the wound must be closed. This may be done by stitching or pinning, but care must first be taken to ensure that the wound is clean and that all lint has been removed from it.\textsuperscript{138} Certain plasters from the catalogue may be applied to help the wound agglutinate. Furthermore, it is not a bad idea, when the wound is serious, after applying something beneficial, to bind over it wool soaked in vinegar and oil;\textsuperscript{139} vinegar (for cleaning) and oil (for softening) appear again elsewhere in the account, and the reader of the New Testament will observe the similarity to the Good Samaritan’s actions at \textit{Luke} 10:34. Last of all the wound is to be bandaged; instructions for this are given at V 26 24. If all goes well the inflammation will subside and new flesh grow in the wound over the following days.

If all does not go well, the wound will be afflicted by cancer, a generic term for various types of ulcer or corruption which arise when a wound does not heal properly. Celsus mentions that the Greeks recognised various different kinds of cancer, including \textit{erysipelas}\textsuperscript{140} (a painful redness around

\textsuperscript{133.} histrio...
\textsuperscript{134.} V 26 1C-D.
\textsuperscript{135.} V 26 21A.
\textsuperscript{136.} V 26 21C.
\textsuperscript{137.} V 26 22.
\textsuperscript{138.} V 26 23BC.
\textsuperscript{139.} V 26 23H.
\textsuperscript{140.} V 26 31B.
the wound) and gangrena,\textsuperscript{141} which occurs only in prominentibus membris, id est inter ungues et alas uel inguina ‘in the prominent limbs, i.e. from armpits to fingernails or from groins to toenails’.\textsuperscript{142} The treatment of gangrene is given at V 26 34, and the account ends on a sombre note:

Not infrequently all remedies are ineffective and this cancer spreads in spite of them. In these circumstances there is but one unhappy remedy, to amputate the limb which is gradually dying, so that the rest of the body may be preserved.

The operation of amputation is described in the section on surgery.\textsuperscript{143}

Celsus next deals with bites, principally dog-bites and snake-bites. Included in the section on dog-bites is a paragraph on hydrophobia:

When too little has been done for such a wound, fear of water (the Greek word is hydrophobia\textsuperscript{144}) often arises. This is a most unpleasant type of illness in which the victim is tortured simultaneously by thirst and by fear of water. For people suffering from this there is little hope. However, there is one single remedy, namely to push the patient unexpectedly into a tank of water which he has not previously noticed. If he cannot swim, allow him to go under and drink, then pull him out, and repeat this several times; if he can swim, push him under several times so that he drinks his fill of water whether he wants to or not. Thus his thirst and his fear of water are relieved simultaneously.\textsuperscript{145}

In the section on snake-bites cautious application of a tourniquet is advised:

First of all the limb must be bound above the wound, but not too tightly, lest it grow numb; then the poison should be extracted.\textsuperscript{146}

One of the ways to do this is to suck the poison from the wound.\textsuperscript{147} The bite of a scorpion is considered at V 27 5, and the section on wounds caused by violence from without ends at V 27 13 with a brief consideration of burns.

Then begins the consideration of disorders arising from within. These are mainly sores of many different types. First Celsus deals with those which may appear on any part of the body; the list starts with carbuncles\textsuperscript{148} and passes through a wide variety of afflictions from chilblains\textsuperscript{149} to boils.\textsuperscript{150}

With the beginning of Book VI another new section begins. The subject is still ulcera, but now they are classified according to the part of the body in

\begin{itemize}
\item[141.] V 26 31C.
\item[142.] My translation here corrects the Loeb version, which has mistaken the meaning of \textit{inter} (and repeats the error at VII 33).
\item[143.] VII 33.
\item[144.] Celsus’ Latin translation of the term is \textit{aquae timor}.
\item[145.] V 27 2C.
\item[146.] V 27 3A.
\item[147.] V 27 3CD.
\item[148.] V 28 1A.
\item[149.] V 28 6.
\item[150.] V 28 8.
\end{itemize}
which they occur. So the section starts with dandruff\(^\text{151}\) and ends with diseased toenails.\(^\text{152}\). There is very little here of interest to anyone except the skin specialist; but we may observe a sudden flash of humanity at VI 5 1:

To treat pimples, moles and freckles\(^\text{153}\) is pretty much a waste of time; but it is impossible to deter a woman from the care of her complexion.

By far the longest portion of this section is devoted to diseases of the eyes,\(^\text{154}\) starting with *lippitudo*, which consists mainly of runny eyes and swollen lids;\(^\text{155}\) references elsewhere suggest that this was a common complaint in the classical world, and Celsus points out\(^\text{156}\) that there were available for treating it *multa multorum auctorum collyria* 'many salves devised by many inventors' — he gives details of several. A large variety of ulcers and inflammations of the eyes follow. In a later section Celsus deals with toothache which, he says, 'can be counted among the greatest torments';\(^\text{157}\) the remedies here are various applications, for dentistry is the province of the surgeon.\(^\text{158}\).

Interesting to the linguist are Celsus' comments at the beginning of the section on diseases of the genital organs and the anus:

Next come matters concerning the obscene parts.\(^\text{159}\) The Greeks find the names of these intrinsically less offensive, and now accept them in practice, bandying them about in almost every medical volume and discourse; we regard the words as more indecent, and not even the customary usage of those who speak with greater modesty has commend- ed them to us. This makes the explanation of these matters the more dif- ficult for those who would maintain both decency and the precepts of the art. But this consideration must not be allowed to deter me from writing, firstly because it is my desire to include everything to do with health that I know about and secondly because the treatment of these areas of the body, which everyone is extremely reluctant to show to another, should be known to as many people as possible.\(^\text{160}\)

In his discussion he uses no Greek names for the parts of the body, but some of the conditions are given their Greek titles, such as *haemorrhoides*.\(^\text{161}\) It may be observed that his name for the genital organs is not *genitalia* but *naturalia* or *naturales partes*.\(^\text{162}\)

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\(^\text{151. VI 2.}\)
\(^\text{152. VI 19.}\)
\(^\text{153. uari et lenticulae et ephelides.}\)
\(^\text{154. VI 6.}\)
\(^\text{155. VI 6 1.}\)
\(^\text{156. VI 6 2.}\)
\(^\text{157. VI 9 1.}\)
\(^\text{158. VII 12.}\)
\(^\text{159. obscenae partes.}\)
\(^\text{160. VI 18 1.}\)
\(^\text{161. VI 18 9.}\)
\(^\text{162. The phrase genitales partes occurs at Lucretius: On the Nature of Things IV 1044.}\)
Part III: Surgery

The Greek word *cheirourgia* (lit. 'hand-working') from which our word 'surgery' is derived appears in the text only at Pro. 9. It is traceable back to the fifth century B.C., appearing at line 673 of Aristophanes' *Lysistrata*, where it is plural and means 'achievements of handcraft'. The singular occurs in a paragraph heading in the Hippocratic treatise *In the Surgery*; there it is an abstract noun meaning 'operating'. Latin has no word meaning 'surgery': the nearest equivalent to *cheirourgia* in this sense is Celsus' phrase *manus curatio* 'hand-treatment'.

After referring to the great surgeons of the past Celsus writes a famous passage in which he describes the qualities needed to make a surgeon:

The surgeon must be a young man or at least on the youthful side. He must have a nimble yet firm hand which never trembles, and must be able to use his left hand as easily as his right. He must have keen, clear eyesight and dauntless courage. He must feel pity for his patient to the extent of wanting to cure him but not to the extent of being induced by his screaming either to go faster than necessary or to cut less than required: he should do everything as if completely unaffected by the moans of the other.

He then gives a definition of the province of surgery:

The question may be asked what is the special province of this branch of medicine, the point being that surgeons often claim for themselves the treatment of many sores and wounds which I have dealt with elsewhere. I have left for this branch of medicine those cases in which the physician makes a wound which was not there to begin with, and those cases of sores or wounds in which I believe surgery is more useful than drugs, and lastly everything about bones.

The bones are in Book VIII, and the other material in Book VII.

To the material in Book VII is applied the now familiar division into conditions which may occur in any part of the body and conditions which affect only some specific part. The first group is much the smaller; the longest sec-

163. The achievements include the building of ships.
164. *Ta es cheirourgien kat' ietreon* 'requisites for operating in the surgery' (II).
165. VII 7 13A and 8 1; also *manus curatio* 'treatment by hand' (VII 7 15A) and *manus auxilium* 'hand-assistance' (VII 31 1A). The phrase *curationem manus postulant* 'they demand treatment by hand' at VII 7 15A is shortened to *manum postulant* 'they demand the hand' at VII 7 1A, which is as near as *manus* ever comes to meaning 'surgery' on its own. Compare also *maius in manu quam in medicamentis* 'greater in the case of the hand (i.e. 'surgery') than in that of drugs' (VII 4 1A), and note 168 below.
166. VII Pro. 4.
167. i.e. in the section on drugs.
168. *plus profici manu quam medicamento*.
169. VII Pro. 5.
tions in it are on abscesses\textsuperscript{170} and fistulae.\textsuperscript{171} Treatments for both of these are given also in the section on drugs;\textsuperscript{172} in general surgery is for the more serious or complicated forms.

Of more general interest is the last section, in which Celsus deals with the extraction of a weapon which has become lodged in a wound.\textsuperscript{173} He points out that there are basically two ways in which this may be done:

All missiles are extracted either on the side from which they came or on the side towards which they were travelling.

In other words they are either pulled out backwards or pushed on and out through the other side. The latter procedure is very tricky, and Celsus justifiably begins this section by remarking that missiles lodged in wounds magn\textit{o negotio saepe eiciuntur} 'are often very troublesome to remove'.

There follows a passage detailing some specific types of weapons and dealing with the special problems involved in extracting them from wounds. The section is unfortunately too long to quote here.\textsuperscript{174} Arrows generally need to be pushed on rather than pulled back, and there are special techniques for dealing with barbed arrowheads.\textsuperscript{175} Broader weapons such as the head of a spear are generally not to be pushed on through, as the exit wound which the surgeon must make is too large; for pulling them back the way they came in Celsus recommends a special instrument called Diocles' Scoop.\textsuperscript{176} Lead balls and pebbles are also best extracted through their entry wound, but if they have lodged in a bone the problems are much greater.\textsuperscript{177} Poisoned missiles require prompt treatment for the poison.\textsuperscript{178}

The rest of Book VII is taken up with a discussion of conditions which appear only in certain parts of the body; as in the corresponding section under drugs they are grouped according to the part affected, starting from the head and working downwards. A long passage concerns the eyes.\textsuperscript{179} Of historical interest here is Celsus' description of the operation for 'couching' a cataract, which he introduces with a brief description of the anatomy of the eyeball.\textsuperscript{180} The extraction of teeth and of tonsils is also considered.\textsuperscript{181}

\begin{itemize}
\item \textsuperscript{170} VII 2.
\item \textsuperscript{171} VII 4.
\item \textsuperscript{172} V 28 11-12.
\item \textsuperscript{173} VII 5.
\item \textsuperscript{174} VII 5 2-5.
\item \textsuperscript{175} VII 5 2.
\item \textsuperscript{176} Celsus gives a detailed description of this instrument, but there is doubt over the precise meaning of some of the words, and no instrument answering to the description has ever been found. See Milne, J.S.: \textit{Surgical Instruments in Greek and Roman Times} (repr. 1970) p.142.
\item \textsuperscript{177} VII 5 4.
\item \textsuperscript{178} VII 5 5.
\item \textsuperscript{179} VII 7.
\item \textsuperscript{180} VII 7 13-14.
\item \textsuperscript{181} VII 12 1 and 2.
\end{itemize}
Mention is made of a condition similar to goitre, and also of hernia. Much the longest section concerns the genital organs and the region surrounding them; this includes a description of the anatomy of the male genitals. There is a lengthy and very detailed description of the operation for removing a stone from the bladder; Celsus warns that this is a dangerous operation. Conditions peculiar to women follow. The book closes with accounts of operations for removing varicose veins, for treating ulcers in fingers and toes, and lastly for amputation of a gangrenous limb.

Book VIII, closing the work with a discussion of bones, begins with a description of the human skeleton paralleling that of the internal organs noted earlier. For the student interested in the history of nomenclature this is another happy hunting-ground. Names used by Celsus and still in use include vertebra, (h)umerus, radius, femur, patella and tibia. Equally interesting are the names which differ from the modern technical names, such as cubitus for ulna and sura for fibula. The clavicle is not named here; elsewhere in the work it is called iugulum.

After this description Celsus lists six different types of injury to bones: uitiatur 'it is diseased', finditur 'it is split', frangitur 'it is broken', foratur 'it has a hole bored through it', conliditur 'it is bruised' and loco mouetur 'it is dislocated'.

Celsus describes how, in treating diseased bones, the diseased part should be scraped or cauterised. He writes:

If the surgeon scrapes, he should press boldly upon the instrument so that he may get the job done and finish the sooner. The end is when either white or solid bone is reached. White bone instead of black or

182. VII 13.
183. VII 17: the word hirnea (sic) appears in the text at VII 18 3.
184. VII 18 1-2.
185. VII 26 2 - 27 7.
186. VII 28 and 29.
188. VII 32.
189. VII 33.
190. IV 1.
191. VIII 1 11.
192. VIII 1 18.
193. VIII 1 19.
194. VIII 1 24.
195. VIII 1 25.
196. VIII 1 26.
197. VIII 1 20.
198. VIII 1 26.
199. VIII 8 1.
200. VIII 2 1 - 3 10.
comparative hardness instead of decay.\footnote{caries.} indicates the end of the diseased portion; I have already pointed out that healthy bone bleeds a little.\footnote{VIII 2 3.}

In more serious cases part of the bone must be cut out, and Celsus describes two instruments which may be used.\footnote{VIII 3.} One, called modiolus, is used if the portion to be excised is very small; the other, called terebra, if it is larger.\footnote{Milne, J.S., op.cit. note 176, p.131 (modiolus), p.126 (terebra).}

In the following paragraphs he describes the use of each; this includes a description of trepanning the skull, an operation which was already old in his day. His description includes the use of a bronze plate which could be inserted under the skull to protect the brain from injury as the surgeon cuts away the diseased portion of the skull.\footnote{VIII 3 8.}

The next four conditions are taken together,\footnote{VIII 3 11.} and the treatment of them is considered down to the end of VIII 10. The arrangement is by place, starting with the skull.\footnote{VIII 4.}

Celsus begins by listing signs, such as bleeding from the nose or ears, which may lead the surgeon to suspect the presence of a skull fracture, then describes the method of exploring a flesh wound with a probe (specillum) to ascertain whether the skull beneath is fractured. He warns the surgeon not to be deceived into regarding one of the normal sutures of the skull as a fracture, and continues:

Hippocrates recorded that he had been deceived by the sutures. Such a confession is the mark of a great man with confidence in his own greatness. Men of shallow mind, who have nothing, never diminish themselves in any respect; but a man of great intellect, who nonetheless will have much, is enhanced by the simple confession of a genuine error, and in handing down to posterity a service of practical benefit he will by his confession prevent others from being deceived in the same way as he was before. It was the memory of a great teacher which somehow led me to make this digression.\footnote{Quintilian: The Education of an Orator III 6 64; Plutarch: Progress 82D.}

The passage of Hippocrates referred to here is *Epidemics* V 14; Quintilian\footnote{Quintilian: The Education of an Orator III 6 64.} and Plutarch\footnote{Plutarch: Progress 82D.} both refer with approval to the same passage. Following this, Celsus deals at length with the treatment of skull fractures, including once again the use of the trepan. Then he briefly considers the treatment of another 'great man with confidence in his own greatness' was Samuel Johnson:

"'I inherited (said Dr Johnson) a vile melancholy from my father, which has made me mad all my life, at least not sober.' — Lady McLeod wondered he should tell this. — ‘Madam, (said Boswell) he knows that with that madness he is superior to other men.'" — Boswell, J.: *Journal of a Tour to the Hebrides*: Thursday 16 September.

201. caries.
202. VIII 2 3.
203. VIII 3.
205. VIII 3 8.
206. We may note that colliditur 'is bruised' is glossed as exasperatur 'is roughened' at VIII 3 11.
207. VIII 4.
208. VIII 4 3. Another 'great man with confidence in his own greatness' was Samuel Johnson: "'I inherited (said Dr Johnson) a vile melancholy from my father, which has made me mad all my life, at least not sober.' — Lady McLeod wondered he should tell this. — 'Madam, (said Boswell) he knows that with that madness he is superior to other men.'" — Boswell, J.: *Journal of a Tour to the Hebrides*: Thursday 16 September.
209. Quintilian: *The Education of an Orator* III 6 64; Plutarch: *Progress* 82D.
broken noses\textsuperscript{210} and ruptures of the ear cartilage.\textsuperscript{211}

The next section, on fractures of the lower jaw, begins with some remarks on fractures in general:

Any bone, then, may either be split in a straight line along its length like a log or be broken across (sometimes obliquely). In the latter case the ends are sometimes blunt and sometimes pointed. The last is the worst kind, for the ends are not easily joined together, having no blunt end to lean on, and they injure the flesh and sometimes also sinews or muscles; and indeed sometimes there are several fragments.\textsuperscript{212}

Further on he gives rough estimates of the time required for broken bones to heal:

Between fourteen and twenty-one days: lower jaw, cheek-bones, collar-bone, breast-bone, shoulder blades, ribs, spine, hip bone, ankles, heel, hand, foot. Between twenty and thirty days: bones of the lower leg and forearm. Between twenty-seven and forty days: humerus and femur.\textsuperscript{213}

There follow sections on the collar-bone\textsuperscript{214} (he points out that it sometimes heals of itself without requiring setting or bandaging) and on ribs\textsuperscript{215} (which may be either cracked or completely broken). Then to arms and legs, which section also begins with some general remarks:

There are some points common to the upper and lower arms, the upper and lower legs, and the fingers and toes. For one thing, there is least danger when the middle of the bone is fractured. The nearer the break is to the upper or lower end, the worse it is: the greater the pain it causes and the more difficult it is to treat. A simple transverse fracture is the least troublesome; it is worse when there are many fragments or when it is oblique, and worst of all when the ends are pointed. Sometimes fractured bones in arms and legs remain in place; much more frequently they slip out and overlap each other, and this is the first point to be taken into consideration. The signs are unmistakable. If they are in place, they make a noise when moved and produce a stabbing sensation; they are not level to the touch. But if they are in contact slantwise (not end-to-end), as happens when they are not in their right place, that limb will be shorter than the other and its muscles swell.\textsuperscript{216}

He goes on to describe how, in this case, the limb must be extended; and then there are detailed instructions as to how the limb should be

\textsuperscript{210} VIII 5.
\textsuperscript{211} VIII 6.
\textsuperscript{212} VIII 7 1.
\textsuperscript{213} VIII 7 5.
\textsuperscript{214} VIII 8.
\textsuperscript{215} VIII 9.
\textsuperscript{216} VIII 10 1AB.
bandaged.\textsuperscript{217} Splints (ferulae) are used only if the fragments need to be held firmly in position. For injuries to the forearm the use of a large arm sling is advocated;\textsuperscript{218} the Latin name is mitella, a diminutive of mitra 'scarf', showing how the bandage originated. For fractures of the leg Celsus advocates the use of a canalis; the nature of this is suggested by the word's regular meaning 'channel' or 'gutter', and its function must have been similar to that of the modern plaster cast (but the leg was bandaged before being placed in it). It has various lengths according to the position of the fracture in the leg.\textsuperscript{219} Finally there are discussions of the treatment when a flesh wound accompanies the fracture, when a fragment of bone becomes detached, when a fracture fails to unite, and when it unites crookedly (it must be re-fractured and reset\textsuperscript{220}).

The last section of the work deals with dislocations.\textsuperscript{221} Celsus recognises two types, one where bones which are normally joined together come apart and the other (much commoner) where a joint is dislocated. The first type is considered very briefly at 11 2; the section ends as follows:

Bones which come apart never join up again; and although the place is somewhat marred in appearance none of its function is lost.

The material on joints occupies the rest of the book,\textsuperscript{222} and begins as usual with some general remarks:

All joints, including the lower jaw and the vertebrae, being bound together by strong sinews, dislocate either by the application of some force or because the sinews have been ruptured or weakened by some accident. The injury occurs more readily in boys and youths than in the more robust. Joints slip out either forwards <or backwards or inwards> or outwards, some in any of the four directions, some not. There are some signs which are common to all, some special to each: there is always a swelling on the side into which the bone has protruded and a hollow in the side from which it has receded.

After this, Celsus goes one by one through the joints which may be affected, indicating in each case the method by which the joints may be forced back into position. After considering the lower jaw\textsuperscript{223} he makes very brief mention of dislocations of the neck. This injury, he says, normally results in death; and he goes on:

I thought I should set down this condition, not because there is any cure for it, but in order that people should know the signs by which it

\textsuperscript{217} VIII 10 IEG.
\textsuperscript{218} VIII 10 3B.
\textsuperscript{219} VIII 10 5B.
\textsuperscript{220} VIII 10 7N.
\textsuperscript{221} VIII 11-25.
\textsuperscript{222} VIII 11 3 - 25 5.
\textsuperscript{223} VIII 12.
may be recognised and should not think that their physician had let them
down if they have lost someone in this way.\footnote{224}
The next section, almost equally short, is equally gloomy; it deals with
dislocations of the spinal vertebrae, and includes the statement:

From such accidents the man dies more slowly than when the neck is
dislocated, but still within three days.\footnote{225}

Next come dislocations of the shoulder\footnote{226} and elbow.\footnote{227} The concern is
mainly with techniques for reducing the dislocation. The rest of the upper
limb is similarly dealt with,\footnote{228} and then the lower limb.\footnote{229} There are
references to various instruments used for reducing dislocations of the hip;
and in the treatment of dislocated toe joints Celsus recommends the use of a
\textit{canaliculus}, a small version of the \textit{canalis} used in leg fractures.\footnote{230} Lastly
there is a section on dislocations accompanied by wounds, and the work
comes to an abrupt end.

\footnote{224. VIII 13.}
\footnote{225. VIII 14 2.}
\footnote{226. VIII 15.}
\footnote{227. VIII 16.}
\footnote{228. VIII 17-19.}
\footnote{229. VIII 20-4.}
\footnote{230. See also VIII 8 1C.}