

10. Of which there are eight basic types; see Hankinson, ch. 8 in this volume, pp. 220–1.
11. See De Lacy (1992, 47).
12. See Nickel (2001, 42–4).
13. See May (1968, Introduction, 59–60).
14. See further Hankinson, ch. 6 in this volume.
15. See further Donini, ch. 7 in this volume.

11 Therapeutics

INTRODUCTION

For all Galen's many faces – medical scientist, public dissector and demonstrator, psychologist and moral philosopher, logician, linguist, commentator, lexicographer and literary critic, pharmacologist, historian of thought and story-teller – we should not forget that he regarded himself primarily as an *iatros*, a healer of patients and a restorer and preserver of health. Indeed, the principal job (*ergon*) or aim (*skopos*) of the medical art, he repeatedly says, is the treatment of disease and the preservation of health;¹ and it is his primary responsibility as a doctor to carry out that job in an indefinite number of particular cases. For while most other areas of Galen's activity are of a theoretical nature and aimed at attaining knowledge and understanding of universal truths, healing is by definition a practical activity concerned with individual patients constituting particular cases of illness.

Yet in spite of its fundamental importance, Galen's therapeutics has, as far as I am aware, never received anything remotely aspiring to a comprehensive scholarly treatment. The reason for this is not difficult to see. Therapeutics is, in a way, the *summa* of all of Galen's other activities: it both presupposes them and is their culmination. In order to make sense of Galen's therapeutic theory and practice, and indeed in order to be a successful healer oneself, one needs to

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have mastered – as he says himself – his general theory of medical science, his views on the specific modes of therapeutic intervention – dietetics, pharmacology, surgery and their subspecies² – and his views on the specific diagnosis and treatment of particular pathological conditions.³ In addition, one needs to have a solid grasp of the rules of logic and scientific methodology, in particular such epistemological tools as division, the analysis of items into genus and species relationships, and the use of definitions; and one needs to have a fairly advanced understanding of *endeixis* (therapeutic ‘indication’) and of what Galen calls *diorismos*, ‘specification’ or ‘qualification’, i.e. the correct determination of the relevant conditions under which a general therapeutic statement is true.⁴ One further needs to know how to apply all these abstract rules and principles to individual cases, to recognize and identify individual cases correctly and to relate them to a more generic pattern; and as a healer, one should have the flexibility to adjust the treatment to the requirements and circumstances of the individual patient one is trying to cure.

Hence a comprehensive account of Galen’s therapeutics would have to cover, albeit in varying degrees of detail, pretty much all areas of Galen’s work – as indicated by the numerous cross-references Galen gives in his therapeutic writings to more specialized treatment of the topic in other works. Apart from his general discussions of therapeutics as offered in the *On the Therapeutic Method* (MM, which fills the whole of vol. 10 of Kühn’s edition)⁵ and in the shorter *Therapeutics to Glaucon* (MMG: XI 1–146),⁶ it would have to comprise his views on the more specific modes of treatment such as pharmacology, dietetics and surgery, as expounded in his voluminous works on drugs and drug treatment (vols. XI–XIII of Kühn), in his works on food and regimen (vols. VI–VII), his writings on surgery, as well as his commentaries on the relevant works of Hippocrates (vols. XV–XVIII); and this would include also the subspecies of these modes of treatment such as venesection, to which he devoted several specialized treatises (vol. XI),⁷ and various modes of plasters and bandages, the uses of bathing, the medicinal uses of various types of oil, purgatives and of course his well-known compound theriac, etc. It would further have to cover his views on the normal functioning of the body and its parts, and hence the whole of his anatomy and physiology (vols. II–IV); and it would have to comprise his views on

the prognosis, diagnosis, understanding and treatment of a very large number of specific medical conditions (diseases, injuries, affections) and on the correct aetiology, symptomatology and classification of fevers and other pathological states (vols. VII–IX). It would further have to comprise Galen’s views on the preservation of health and hygiene and the prevention of disease as expounded, e.g., in his substantial works *On the Preservation of Health* (*San. Tu.*)⁸ and *On the Properties of Foodstuffs*⁹ (*Alim. Fac.*) (vol. VI), and it would have to take account of his deontological views (scattered all over his writings) on therapeutic intervention or non-intervention, on the causes of therapeutic error, or on the role of the patient in the therapeutic process.

Moreover, in all this we would have to distinguish between Galen’s theory of therapeutics and his practice as a healer in individual cases, of which he gives numerous examples, often in the form of case-histories and anecdotes with which he intersperses his theoretical discussions. This distinction is problematic, for in the absence of eye-witnesses’ reports, Galen’s therapeutic practice can never be fully recovered beyond what he himself tells us about it in his works,¹⁰ and that story is bound to be coloured by Galen’s own interpretation and presentation of the pathological phenomena he was confronted with and of the therapeutic measures he took on each and every occasion – quite apart from his own literary embellishment, his rhetorical tendency to self-presentation and indeed self-glorification and his biased presentation of the failures of other healers.

Within this large field, we would then have to focus on some of the more striking general aspects of his therapeutics, such as the question of his originality versus his dependence on earlier modes of treatment as found in the works of his predecessors. How innovative was Galen as a healer? What new remedies or therapies did he propose for the treatment of particular diseases? What changes or ‘advances’ – if that term does not sound too positivistic – did he initiate in the application of specific remedies?¹¹ In this connection, we would have to examine his relation to, and representation of the views of earlier medical authorities, such as ‘Hippocrates’ (as Galen constructed him), or Plato, Aristotle, Diocles, Herophilus and Erasistratus, as well as his polemics against rival medical schools such as the Methodists and the Empiricists, the ‘sophists’ or the

unidentified 'doctors' (*iatroi*) of his own age; and we would have to consider whether his therapeutics are really so superior to those proposed by his competitors. We would also be interested to know more about the rationale underlying his therapeutics, both explicit – as given by Galen himself – and implicit – as it is to be inferred from his works, or the works of predecessors, or from what is generally known of ancient therapeutics. And a further point of interest would be the narrative character and anecdotal structure of much of Galen's accounts of therapeutic activity.

It will be obvious that within the scope of this chapter we can deal with only a small selection of all this material. Besides, some of the areas mentioned are covered elsewhere in this volume, while others – such as the assessment of the rationale and possible efficacy of Galen's therapies from a contemporary medical perspective – are beyond my competence. My purpose is to discuss Galen's general theory of therapeutics; and my discussion will largely be centred around Galen's own synopsis of therapeutics as expounded in his *Therapeutics to Glaucôn*, a treatise which was written in the early 170s and which has the advantage of being short and reasonably systematic. In addition, I will refer to relevant remarks in Galen's *On the Therapeutic Method*, especially books I and II; other textual evidence will be cited as appropriate.¹²

THE UNIVERSAL AND THE PARTICULAR

Glaucôn has requested that Galen provide 'an outline of a general method of treatments' (*íamatôn tina . . . katholou methodon hupotupôsthai*), and this is what Galen sets out to do (MMG I.1: XI 1). The terminology is significant here. First, there is the notion of the 'general' or 'universal' (*katholou*). Right from the start, Galen realizes that there is a tension between the theory of therapeutics, which aims at universal knowledge, and the practice of therapy which is concerned with particulars. On the one hand, he argues, the treatment of each individual patient ought to be based on universally valid scientific medical knowledge, i.e. anatomy, physiology, pathology, diagnostics, dietetics, pharmacology and surgery, founded on secure theoretical principles and obeying the rigorous rules of logic. The reason is, Galen insists, that without such a theoretical basis, therapy will often not be successful and prone to error. Indeed, time and

time again Galen stresses this crucial importance of universal scientific theory for therapeutic practice, and he goes out of his way to point out how fatal errors made by rival healers can be explained by reference to their lack of a proper theoretical grounding or their failure to apply the rules of logic and philosophy of science with sufficient rigour. In other words, medical science in its full universal, theoretical sense is not just an academic luxury: it is, or at least it can be, a matter of life and death.

At the same time, however, therapy is concerned with 'the individual', or 'the peculiar' (*to idion*), the particular individual case the doctor is confronted with and which is different every time. Galen refers here to Aristotle's notion of 'the particular' (*to kath' hekaston*), as set out in *Metaphysics* 1.1 and illustrated by Aristotle with examples derived from medicine: the doctor may know what drugs to administer in cases of a certain type, and the good doctor may even know, on what universal grounds, i.e. for what general reasons, these drugs are to be administered in these types of cases, but ultimately his job is to cure individual people like Callias or Socrates, not humans of a certain type or indeed humans in general – even though, according to Aristotle, science is not of the particular as such (*Posterior Analytics* 1.24). Likewise, Aristotle's discussions of ethics provide a useful model for Galen here: the science of ethics is a practical science, which is valuable only if it can be applied to individual circumstances.¹³ No general theory can fully cover these; each case is unique and defies reduction to a general pattern. And this means, Galen interestingly notes, that it is impossible to arrive at a universal theory by induction from particulars, for each particular case will add new information and it will be a never-ending process.¹⁴ Nevertheless, Galen goes on to argue, there is such a thing as a theory of 'the common human nature' (*koinê phusis anthrôpôn*), based on a combination of theory and experience in anatomy and physiology, and he is confident that this theory will be sufficiently accurate and detailed to provide at least a relevant framework in which individual therapeutic actions can successfully take place (I.1: XI 1–2.)

Secondly, there is the word 'method' (*methodos*), perhaps better, though somewhat clumsily, translated 'methodicity' or 'methodicalness', for it is the opposite of 'proceeding by chance' or 'luck'. This term is charged with meaning, for Galen uses it frequently in polemical discussion with his two most prominent rivals in medicine, the

Empiricists and the Methodists. The former are often criticized by Galen for their lack of any method at all, their uncontrolled and ad hoc 'trial-and-error' approach to therapeutics, and their tendency to improvising and experimenting with remedies without any clear theoretical knowledge of what they are doing.¹⁵ With the latter, especially the Methodist Thessalus, Galen's battles are more vigorous and his polemics more venomous, possibly because the Methodists could claim considerable success in their treatment of disease. As their name suggests, they, too, had their *methodos*, indeed, being 'methodical' was precisely what they claimed their medicine was all about; and this method was so effective, they claimed, that one could acquire it within six months.¹⁶ But Galen, who adopts the same term and includes it prominently in the title of his principal work on therapeutics, *On the Therapeutic Method*, insists on numerous occasions that they are in fact *amethodoi*, 'without method'. Their treatments, e.g. their characteristic *diatritos*, the 'three-days-period'¹⁷ of starving a patient, are dismissed as erroneous, ill-founded, inconsistent, dangerous or even downright harmful; and the reasons for these defects vary from lack of logical rigour, lack of proper anatomical and physiological knowledge, lack of experience and knowledge of the relevant condition, erroneous starting-points, etc.¹⁸

SOME FUNDAMENTAL THERAPEUTIC PRINCIPLES

Galen next states what his 'method' of healing involves. The first requirement the healer has to meet is to have knowledge of 'the quality and quantity of the relevant remedies' (*poiotês kai posotês tôn boêthêmatôn*), the 'mode of their application' (*tropos tês chrêseôs autôn*) and the 'discernment of the right time of application' (*diagnôsis tou kairou*) (MMG I.1: XI 1-2). The first two may be learned through courses in dietetics, pharmacology and surgery; but the latter is the most difficult of all, he says – which reminds one of the first Hippocratic *Aphorism*: 'opportunity is fleeting' (*kairos oxus*). It is impossible to state general rules here, Galen says: it is a matter of 'conjecture' (*stochasmos*),¹⁹ based on the healer's professional judgement of the circumstances, which differ from one individual case to another. A further complication is that the healer often comes across a patient for the first time when (s)he is ill, without having been able to examine the patient in his/her healthy state. This is another reason why a general knowledge of pathological

conditions is both insufficient and at the same time the only thing one has at one's disposal: the healer will never have full advance knowledge of the patient (s)he is treating, and this always carries an element of risk. The best one can do is to work on the basis of a combination of general theoretical knowledge and practical experience.

The above may seem pretty commonsensical, but Galen then moves on to put his peculiar stamp on things. The most important thing, he says, is that the healer makes the right 'divisions', for this is where many doctors go wrong and to which most therapeutic failure can be reduced.²⁰ 'Division' renders *diairesis*, and a related concept which Galen uses in this context is *diorismos*, which can be translated as 'qualification', or 'specification', or 'determination'. These concepts represent two major epistemological procedures which Galen adopts from earlier Greek philosophy and science – he refers in this context to Hippocrates, Plato and to the fourth-century medical writer Mnesitheus of Athens, of whom he has preserved an important fragment on the use of division in medicine – and which he applies throughout his massive work. 'Division' refers to analysis of general classes of items (things, objects, phenomena, entities, but also ideas) into more specific kinds; sometimes it refers in particular to the analysis into genus, species and differentia. In the area of therapeutics, it means that the pathological condition to be addressed is properly understood in its generic kind and its specific manifestation, so that treatment can be targeted at the right level. For example, if it is known that conditions of kind A can only be treated with remedy B, it is important that if a specific condition C is in fact a species of kind A, it is recognized as such, so that treatment B can be applied accordingly. It is therefore important that these divisions are done according to the correct and relevant differentia (*diaphora*), in other words that one applies the division at the right cutting point (*tomê*). Another important application of the principle of division in the area of therapeutics is the distinction between disease (*nosos*, *nosêma*) and symptom (*sumptôma*) as two different kinds of 'unnatural states',²¹ or between different kinds of symptoms,²² or between disease and 'affection' (*pathos*),²³ or between several different kinds of 'imbalances' (*duskrasiai*),²⁴ 'fevers' (*puretoi*) and 'inflammations' (*phlegmonai*).²⁵

As for the other term, *diorismos* means that a generic therapeutic rule, e.g. that treatment B is an effective remedy against conditions of

type A, is considered, and if necessary refined and adjusted, according to a number of criteria that determine the extent to which that rule is valid in a particular case.²⁶ Some of these criteria have to do with the body of the patient, e.g. age, gender, physiological constitution, life-style or character, some with the environmental factors such as climate or season, and yet others with the nature of the remedy or the mode of its application, e.g. raw or cooked, pure or mixed, externally or internally administered, etc. As Galen puts it:

If someone uses this method [sc. of division] on everything that is normal and everything that is abnormal, and derives flawless indications (*endeixis*) from all that results from this division, he alone would be free from errors in healing as far as is humanly possible, he would deal with patients whom he knows better than others, and even patients he does not know he would heal to the best of his ability as well as those he does know. For if one divided first according to the difference in age, then according to the temperaments and capacities and all the other factors that pertain to human beings – I mean colour, heat, physical disposition, movement of the arteries, habit, profession, and the character of the soul – and if to these he were to add the difference of male and female and whatever else must be divided in terms of place and seasons of the year and the other conditions of the air surrounding us, he would come close to an idea of the nature of the patient. (MMG I 1: XI 4–6, trans. Dickson, 1998, 39–41)²⁷

Basically, what Galen means is that both in the examination of the case the healer is confronted with and in the planning and execution of the treatment, (s)he should identify, analyse, categorize and classify the relevant information in the right way. 'The right way' means that in the diagnostic picture that emerges and in the therapeutic strategy that follows from it, the phenomena, and the way they are broken down in conceptual theoretical analysis, are classified according to the hierarchy in which they actually stand. Thus in books 1 and 2 of the *On the Therapeutic Method* Galen points out that disease (*nosêma*) should be defined as that which impedes a bodily faculty (*dunamis*) from exercising its activity (*energeia*), like blindness impeding the eye from seeing.²⁸ And he insists that in each particular case of disease, four items should be identified and distinguished: the impaired activity, the condition (*diathesis*) that brings the impairment about, the cause(s) of this situation and the consequences that follow from it (such as symptoms and other accompanying phenomena).²⁹ The crucial therapeutic side to this is that the object of treatment is the condition, the *diathesis*, and not

any of the other items; this is why he thinks it preferable to label this the disease,³⁰ even though terminology is itself unimportant.³¹ And it is therefore of vital importance that the various constituents involved in the pathological situation are properly distinguished and viewed in their correct interrelationship. It is here, Galen argues, that many healers get confused and do not address the situation in the right way. For instance, they mix up the cause of the disease with the condition itself, or they confuse the condition with its consequences, and as a result of these confusions their therapeutic strategy is doomed to failure. They also confuse the conceptual relations between health and disease by putting one in one type of category, and the other in another which is not correlative to it;³² and they interdefine 'health' and 'disease', allowing us no independent grip on either.³³

It now becomes clear why Galen's ideal healer should have a thorough grounding in logical analysis. (S)he should of course also possess a solid theoretical knowledge of anatomy and physiology, especially the different types of 'mixture' or 'blending' (*krasis*) that may occur in the body, and of pathology, especially concerning the division and classification of diseases (including fevers) and other nosological states³⁴ into different genera and species and the correct determination of the relevant physiological 'imbalance' (*duskrasia*). Furthermore, (s)he should have a firm grasp of the correct 'starting-points' or principles (*archai*). Examples of such correct starting-points are the principle that healing takes place by opposites, or the principle that nothing happens without a cause.³⁵ An example of a false starting point is the Methodists' notion of 'generality' or 'common condition' (*koinotês*), which according to Galen cannot empirically be observed and whose existence is uncertain. More in general, his criticism of 'Dogmatists' – i.e. any medical thinker who uses speculative knowledge – is that they adopt starting-points that are not secure and that are disputed.³⁶

The healer should further have a thorough knowledge of causes, and a proper understanding of the different types of causes. Galen was strongly interested in causal analysis, and he wrote separate treatises on 'antecedent' and 'synectic' causes, adopting terminology from earlier, possibly Stoic or Pneumatist, origin.³⁷ Moreover, he was engaged in polemical discussion with a number of rival groups about the therapeutic relevance of antecedent causes: with the Methodists, who rejected causal explanation as irrelevant and misguided, with

the Empiricists, who did recognize antecedent causes but refused to speculate on their causal significance and made the error of deriving therapeutic indications *directly* from antecedent causes, rather than using them (among other things) to determine the patient's inner *diathesis* – which will then yield therapeutic indications³⁸ – and also with the followers of Erasistratus, who had different views on the correct interpretation of these causes. Galen firmly believes that causes are, or at least can be, relevant for the determination of the treatment, for it is quite possible that two cases of the same condition are brought about by different causes and that treatment has to be different accordingly.³⁹ Sometimes, the healer has to do research or even undertake provocative action in order to identify the cause (we shall see an example of this in a moment). On the other hand, Galen is also eager to point out that 'the Dogmatists' sometimes blindly rely on causal analysis, whereas such analysis is not always verifiable or plausible, and the results of that analysis are not always relevant to the treatment and can even be misleading.⁴⁰

Once equipped with this theoretical knowledge and instruments, the healer can go about examining particular cases and determining the appropriate treatment. It is here that Galen's famous notion of *endeixis*, 'indication', comes in. Again, Galen was not the first to use the term; and like *methodos*, it was also used by his rivals, the Methodists.⁴¹ But in his eagerness to distance himself from the Methodists, Galen gives the notion of *endeixis* his own peculiar meaning. There has recently been a fair amount of scholarly discussion of this term, partly inspired by the later history of the notion of 'indication' (and 'contra-indication', *antiendeuknunai*) in medical therapeutics, partly also by the more recent interest taken by students of ancient philosophy in medical accounts of methods of inferential reasoning.⁴² Galen himself defines *endeixis* as 'the reflection of the consequence' (*emphasis tês akolouthias*).⁴³ This 'reflection' – or 'manifestation', 'appearance', 'imprint' – is provided by the body of the patient under examination, and the 'consequence' is either the causal connection between that bodily condition and the physical consequences of this, or the therapeutic procedure that follows from this condition. In other words, the body of the patient, or a particular part thereof, or its specific condition, 'indicates' (*endeiknusi*) what is wrong with it, and how it should be treated. Sometimes this indication is immediately and unmistakably obvious, e.g. in the way in

which it is obvious that a condition of thirst indicates by its very nature that the remedy is to provide a drink: it is, so to speak, what the condition 'asks for'. Yet not always is the indication so straightforward or unambiguous, and in many cases it is clear only to the healer who knows how to identify and interpret correctly the signs given off by the body and to infer a therapeutic strategy from this; and in order to do this, one needs to know what signs to look for, and what signs are relevant. This knowledge is what Galen refers to as the knowledge of 'the actual nature' (or 'essence') 'of the matter'. This is, in his view, what inference by indication should be based on;⁴⁴ and this knowledge is in turn based on a combination of theory and earlier experience, which is brought to bear on the new situation the healer is confronted with.

Thus diagnosis, and the subsequent decision on treatment, are the medical response to the *endeixis* given by the body of the patient. But the adequacy of this response differs not only according to the complexity of the case one is confronted with, but also according to one's medical competence and background knowledge. And this is where Galen once again draws a sharp dividing line between his own method of healing and that of the Empiricists and the Methodists. The Empiricists do not take account of 'the actual nature of the matter'; their diagnostic procedures are either insufficiently specific (*adioristos*), based as they are on a superficial comparison of apparent similarities with earlier conditions, or based on the wrong sort of distinctions;⁴⁵ and their therapeutic practice is a matter of trial-and-error, uninformed by in-depth knowledge of the *krasis* of the patient, the nature of the condition and the appropriateness of the remedy. The Methodists likewise ignore the specific 'nature' or 'essence' of the condition and reduce it to one of their three 'generalities' (*koinotêtes*) such as a 'loose state', or a 'constricted state', or a 'mixed state', and thus fail to diagnose the condition at a sufficiently specific, detailed level – this in contrast to Galen's own distinction between 'primary' or 'common' *endeixeis*, which in a sense everyone knows, and the specific indications which show how to achieve the general 'aims' (*skopoi*) associated with the general ones.⁴⁶ Hence the Methodists' therapeutic strategy (such as the notorious *diatritos*) is likewise misguided.

The following passage from the *Therapeutics to Glaucôn* provides an example of what Galen regards as good, proper use of *endeixis*:

For example, if someone has pains in the head, if he is nauseous and has heartburn and you order him to vomit, he will vomit either bile or phlegm or both. But if no noteworthy indication of affliction in the stomach is apparent, investigate whether there is a plethora or an obstruction or an inflammation of one of the parts in the head. First discover by questioning whether the pain stretches through the whole head or else is situated more vehemently in one of its parts. Discover next whether it occurs with heaviness or tension or a mordant sensation of throbbing. For heaviness indicates plethora; throbbing, inflammation. Tension, if without heaviness and throbbing from uncoacted and flatulent pneuma, indicates plethora; but if there is throbbing, an inflammation of membranous tissues; and if heaviness, an excess contained within the membranes. Accordingly, when you have determined (*dioristheîê*) all these factors, you must investigate each of their productive causes (*tên ergazomenên hekaston autôn aitian*), for this will show you the treatment (*ekeinê gar endeixetai soi tên therapeian*). For example, if an excess of vapours or humours happens to be contained there, see whether due to the intensity of the fever the humours have been liquefied, and boiling, so to speak, have attacked the head, thanks either to the weakness of that part or else to an excess throughout the body – since this would not be hard for someone to cure without purging the entire body. (I.16: XI 61–5, trans. Dickson)

The passage is particularly interesting because it shows how causes can be indicators of treatment, and at the same time how these causes themselves need to be identified first, either by physical examination or even by provocative action to bring them to the surface.

The most significant diagnostic 'indicators' according to Galen are the urine of the patient and the pulse. These are familiar diagnostic tools from earlier Greek medicine: urines received considerable discussion in the Hippocratic *Prognosticon* (esp. ch. 12), and pulse rhythms were recognized as diagnostic and prognostic indicators from Praxagoras and Herophilus onwards.⁴⁷ Urine and pulse are observable entities from which not-directly observable states or factors can be inferred if properly interpreted. This method of inference thus suits the pattern expressed in the classical formula *opsis adêlôn ta phainomena*, 'the appearances provide a view of what is obscure', which was attributed to Anaxagoras and Democritus and applied to the medical sphere by Diocles.⁴⁸ Galen adopts these ideas and elaborates on them, but in addition he mentions other factors that can serve as indicators, such as the difference between men and women, or the influence of weather and the environment. Yet as we have just

seen in the passage cited above, he also mentions indicators that are not so easily observable, such as the 'mixture' or 'blending' (*krasis*) of the patient,⁴⁹ or the causes of the disease in question, or the critical days at which certain symptoms manifest themselves. With these factors, determining or identifying the indicator is itself not by any means a straightforward empirical process, since a patient's physiological temperament is not so easily recognizable; and as we have seen, the identification of the causes can itself also be a complicated procedure.

Even so, Galen is confident that to the expert physician meeting the requirements outlined above, the determination of the nature of the disease in question will indicate the treatment required (albeit perhaps without complete precision). In this determination of the nature of the disease, the healer will be guided by his/her background knowledge of the classification of diseases and symptoms. Here we enter Galen's pathology, as expounded in works such as *Causes of Diseases* (*Caus.Morb.*), *Causes of Symptoms* (*Symp.Caus.*), *Differences of Diseases* (*Morb.Diff.*), *Differences of Fevers* (*Diff.Feb.*), *On Plethora* (*Plen.*) and *On the Affected Parts*. It is a field far too extensive and complicated to cover here, and only some basic remarks must suffice. Briefly, Galen distinguishes three main types of disease: diseases consisting in physiological 'imbalances' (*duskrasiai*) affecting the homoeomerous parts of the body, diseases affecting the organic parts and diseases that consist in a breakdown of the body's overall coherence. Of the first type, Galen in turn distinguishes eight different types of 'imbalance'.⁵⁰ All these distinctions have implications for the treatment, and Galen organizes his discussion in the *Therapeutic Method* and the *Therapeutics to Glaucôn* accordingly. Thus, in the former work, after devoting books 1 and 2 to theoretical issues of methodology and definition, he first treats ulcers and other lesions as well as sprains and fractures (books 3–6), followed by fevers (books 7–12) and by conditions requiring surgical intervention (books 13–14).⁵¹ In the *Therapeutics to Glaucôn*, Galen begins with a discussion of ephemeral fevers, and then moves on to discuss fevers caused by 'inflammation' (*phlegmonê*) and fevers caused by humours (*chumoi*), and in chapter 15, he discusses 'fevers accompanied by symptoms',⁵² where he recognizes the difficulty of diagnosis where two diseases are present at the same time. In book 2, his approach is bodily-part-oriented, and the 'indications' here are provided by such

criteria as 'mixture' (*krasis*), 'formation' (*diaplasia*), 'position' (*thesis*) and 'power' (or 'faculty': *dunamis*). Within these categories he makes various further distinctions, which are all to be taken into account by the healer trying to decide on a proper mode of treatment (but which would take us too long to discuss here).

Once the nature of the disease has been identified, the healer has to determine 'the magnitude of the disease' (*to megethos tou nosêmatos*), the stage in which it is and whether it is curable or not.⁵³ Here, it is also possible that 'contra-indications' may occur, e.g. in cases where the patient's body is too weak to support the treatment normally required.⁵⁴ In such cases, the treatment needs to be adapted or replaced by an alternative, less vexing treatment.

These are, roughly speaking, the fundamental principles of Galen's therapeutics as applied to the treatment of diseases, although in the course of his discussions of specific diseases, specific modes of treatment or individual cases, Galen provides numerous further refinements and sub-distinctions, with ad hoc examples often serving as starting-points for more generalizing considerations. It is beyond the scope of this chapter to go through the large number and variety of remedies and substances that Galen recommends in his treatment of diseases.⁵⁵ One famous and influential medicine that may be mentioned here in particular is theriac, on which Galen wrote a separate treatise (*On Theriac to Piso* [*Ther. Pis.*]).⁵⁶ Another major therapeutic procedure is venesection, a remedy which had been in use in Greek medicine since the days of the Hippocratic Corpus (and probably earlier), although the extent to which writers like the Hippocratics, Diocles and others used the technique is difficult to assess.⁵⁷ In Galen's work, venesection is very prominent: he often recommends it in his own treatment of various diseases, and he devoted four separate works to the topic. The primary reason for the latter was that venesection had strongly been condemned as a useless and indeed quite dangerous method by the Hellenistic doctor Erasistratus, with whom Galen takes issue on a large number of points, possibly because the legacy of Erasistratus still exercised great influence in the second century CE. This was certainly the case for venesection, if we may believe Galen's own account of the views held by the Erasistrateans in Rome of his time. This no doubt explains the polemical tone of Galen's writings on venesection, of which *On Treatment by Bloodletting* (*Cur. Rat. Ven. Sec.*) is probably the most systematic. The

basic principle underlying treatment by venesection was the need for evacuation, usually presented by *plêthos* or *plêthôra*, 'surplus' or 'excess', usually of blood but sometimes also of other substances in the body. Bloodletting was believed to redress the imbalance in the body caused by such excess. But there was also another purpose of bloodletting – so-called 'revulsive' bloodletting, which was meant to bring excessive blood-flow in one part of the body to a halt by subtracting blood from it at another part.⁵⁸ Again, Galen addresses the topic in his peculiar style, referring to a host of earlier authorities who advocated the technique, yet on the other hand giving the impression that he is the first to systematize it and to apply it with sufficient logical rigour and consideration of the need of the patient. Before even contemplating the use of venesection – clearly a technique not without risk – one needs to be clear on the question what states of the body require venesection and for what types of patients it is appropriate – and here he sums up a number of 'specifications' (*diorismoi*) that need to be taken into account such as age, season, nature of the disorder, or habit. One also needs to be able to determine which veins are most suitable for bloodletting, what quantity of blood one should withdraw and whether one should withdraw the required quantity slowly and steadily, or all at once. 'Indications' (*endeixeis*) here are the severity of the disease, the patient's age and the strength of the patient's faculties, the latter being indicated by the pulse. The quantity of blood to be withdrawn is indicated by other factors and is, as Galen concedes, very much a matter of 'conjecture' (*stochasmos*). But it is also possible that the state of the patient's body, or other factors taken into consideration, provide 'contra-indications', in which case bloodletting should be replaced by other, less aggressive means.⁵⁹

PREVENTION OF DISEASE AND REGIMEN IN HEALTH

As said at the beginning of this chapter, Galen claims that the principal aim of medicine is the treatment of disease and the preservation of health. Most of our discussion so far has been concerned with the former, and it may be as well to conclude with some observations about the latter.

Regimen in health, *diaita hugieinë*, had been a major concern and constituent of Hippocratic medical activity; and preservation of health, prevention of disease and effective convalescence after

treatment were considered at least as important as the cure of disease. *Therapeia* means 'care' as much as 'cure', and hence therapeutics was not concerned only with the sick body but also with the healthy body, and indeed not just with the body but also with the mind. These areas had often been discussed side by side in the same context, e.g. in the Hippocratic treatise *On Regimen* and in fourth- and third-century BCE medical writers such as Diocles of Carystus, Mnesitheus of Athens and Erasistratus of Ceos. While Hippocratic dietetics already comprised a wide range of measures and activities such as diet, exercise, sleeping patterns, bathing and hygiene, sexual activity and voice exercises, medical writers from the late fourth century BCE onwards became increasingly engaged in discussions of matters we would associate with life-style rather than medicine, such as cookery, cultivation of food and wine-tasting, gymnastics and fitness, and even with the upbringing of young children and the care for the elderly.

Galen poses no exception to this pattern. Indeed, in his view the *iatros* is by far the most competent expert to deal with these areas – rather than, say, gymnastics trainers (*paidotribai*). In another polemical work entitled *Thrasybulus* (*Thras.*), Galen addresses the question whether health belongs to the discipline of gymnastics or of medicine. Galen points out that the boundaries between therapeutics and hygiene are fluid, since the definition of health itself, too, is fluid. In his key work *On the Preservation of Health* (*San.Tu.*), he defines health as the state of right balance between elementary qualities such as hot, cold, dry and wet, within the homocomerous parts of the body.⁶⁰ Yet this is a relative notion, for this balance is 'peculiar' (*oikeia*) not only to different species of animals but also to individual people – a point Galen elaborates on in books I and II of his important treatise *On Mixtures* (*Temp.*). Hence a mathematically exact definition of health cannot be given, there is always an element of specific or even individual variation; and there are differences and variations according to age or gender, climate and mode of life, which constitute and affect a person's health. This is not to say that there is no dividing line between health and illness, but it is up to the judgement of the competent *iatros* to determine this from one individual case to another – although, again, properly informed by the comprehensive, systematic and universal knowledge of medicine outlined above.

In the case of regimen in health, such systematicity is provided by Galen's distinction between 'bodies', 'signs' and 'causes'.⁶¹ The 'bodies' (*sômata*) of individual people need to be examined and their generic and individual peculiarities need to be taken into account before determining the appropriate course of action; the 'signs' (*sêmeia*) are the diagnostic indicators that provide the relevant information; and the causes (*aitia*) are the factors that bring about health. They can in turn be subdivided into *prospheromena*, i.e. substances that are taken in by patients (e.g. food, wine, drugs, air etc.), *poioumena*, i.e. things that are done by or to patients (e.g. massage, walks, baths, sleep, sexual activity), *kenoumena*, i.e. things that need to be removed from the body, and *ta exôthen prospiptonta*, external influences brought about incidentally.

At the same time, in *San.Tu.* I 2 Galen distinguishes various causes of disturbance of health, which he divides in 'inevitable and innate forms of harm' (such as old age, gradual loss of bodily heat, etc.), and 'causes that are unnecessary and that do not arise from within ourselves', such as the influence of air and the environment.⁶² It is the former which an effective strategy on health needs to address by a preventive or corrective regimen, by supplementing deficits or removing what is in excess; if necessary, even drugs or venesection may be used to achieve this. A major part of Galen's discussion (III 5–10, and the whole of book IV) is taken up by the phenomenon of 'fatigue' (*kopos*), a typically ambivalent condition on the borderline between health and sickness. He distinguishes several different kinds of fatigue, some of which – e.g. tiredness after exercise or sexual activity – are relatively harmless and easily addressed by what he calls 'apotherapy' (*apotherapeia*), a combination of massage, breathing exercises, etc. Other kinds of fatigue are more serious and in need of more extensive, long-term treatment, sometimes requiring the use of drugs and venesection in addition to dietetic measures.

To ensure the best possible physical condition (*aristê kataskeuê tou sômatos*), in particular the optimal bodily 'mixture' or 'blending' (*krasis*), the development of the body needs to be regulated right from the very beginning. Hence Galen devotes considerable attention to the role of regimen in health in the upbringing of children. This also includes moral and psychological guidance, since even moral dispositions and proneness to emotions (e.g. anger), unless properly directed, can have a detrimental effect on bodily health; and in his

work *On Habits (Cons.)*, Galen deals extensively with the role and management of emotions and affective states from a medical point of view. But Galen's theory of health is not restricted to the young and those in the prime of life: he devotes the whole of book 5 of *On the Preservation of Health* to the care of the elderly. Although ageing, Galen points out, is an inevitable process of wasting away (*marasmus*) brought about by cooling and drying and ultimately ending in death, this process can nevertheless be regulated and made as agreeable as possible by a range of dietary measures, such as food and exercise, again of course adapted to the physical peculiarities of the individual, thus enhancing people's quality of life and allowing some to reach a very advanced age.⁶³

This brief account may give some idea of the extraordinary range and scope of Galen's therapeutics. Whether it was as successful in practical terms as Galen claims is another matter – and in this respect it would be very interesting to compare Galen's treatment of specific conditions to that proposed by the Methodist writer Caelius Aurelianus, who is equally insistent on the need to take the condition of the individual patient as point of departure, yet draws radically different conclusions from this for therapeutic practice. Whether such a comparison can be made at all – e.g. in the light of the problems of retrospective diagnosis – is a question I cannot address here. Yet however this may be, in its systematicity, its comprehensiveness, its theoretical and conceptual sophistication, and at the same time in its adaptability to practical, individual circumstances, and thus in its remarkable ability to link theory to practice, Galen's therapeutics certainly stands out as a most impressive achievement, from both a medical and from a philosophical point of view.

NOTES

1. E.g. *MM* II 3: X 92: 'the first and most particular concern of doctors, indeed the thing which is pretty well the defining feature of their business, is the removal of illnesses' (trans. Hankinson, 1991b, 46); see also *Cur.Rat.Ven.Sec.* 4: XI 259; *Thras.* 5: V 810.
2. This was the traditional tripartition of therapeutics which, according to Celsus (*On Medicine*, proem, 9) was established in the time of Diocles, Praxagoras and Herophilus (and possibly, depending on the interpretation of *iisdem temporibus*, as early as that of Hippocrates; see

- the discussion of this passage in van der Eijk, 2005, 110–11). See also Galen, *Subf.Emp.* 5, p. 52, 13–14 Deichgräber; *On the Parts of the Art of Medicine* 6.1–4, pp. 38–41 Lyons; and Sextus Empiricus, *Against the Mathematicians* 1.95. Subspecies were venesection, cautery, trepanation, etc.
3. Cf. Mani (1991, 27–9), who correctly stresses Galen's stance against specialization.
 4. On the role of logic in Galen's therapeutics see Barnes (1991); Kudlien (1991); Hankinson (1991b, 99 ff.); Frede (1981); and see chs. 3 (Tieleman) and 6 (Hankinson) both in this volume.
 5. For a collection of studies on this work see Kudlien and Durling (1991); for a translation and commentary of the first two books, and a general introduction to some of the theoretical issues in Galen's therapeutics, see Hankinson (1991b).
 6. For an English translation of this work, and of Stephanus of Alexandria's commentary on it, see Dickson (1998).
 7. For a translation of these works with introduction and essays see Brain (1986).
 8. For a translation of this work see Green (1951).
 9. This work has been translated into English by Grant (2000), and by Powell (2003).
 10. On Galen as a 'raconteur' in therapeutics, and on the rhetorical and polemical aspects of *MM*, see Nutton (1991, 9–16).
 11. For some examples see Nutton (1991, 18–19); Mani (1991); Brain (1986, 122 ff.).
 12. The reader should be aware that the account offered in Galen's later summary *Ars Medica* (*Ars Med.*) differs in a number of ways from what is presented in *MM* and *MMG*. Within the restrictions of this volume, a detailed discussion of the relationship between the systematizing *Ars Med.* and the other works cannot be offered here; see, however, the useful discussion of *Ars Med.* in Boudon (2000, esp. 159–96).
 13. Aristotle, *Nicomachean Ethics* 1.3 and 1.7, esp. 1098b1–8.
 14. Similar points are made on induction in *Thras.* 5: V 812; *Sem.* 15: IV 581; *SMT* 2.4: XI 469–71.
 15. E.g. at *MM*I 4: X 31: 'Thus attempting to discover something methodically is opposed to doing so by chance or spontaneously. The method follows a certain route in an orderly way, so that there is a first stage in the inquiry, a second, a third, a fourth, and so on through all of them in order until the investigator arrives at what was at issue at the outset. However, . . . experience is unsystematic and irrational, and requires good fortune to arrive at the discovery of what was sought' (trans. Hankinson, 1991b, 17).

16. E.g. *MM* XIII 20: X 927; *SI* 6: I 83.
17. In fact forty-eight hours; the ancients counted inclusively.
18. Cf. Nutton (1991, 17).
19. On the notion of *stochasmos* [*technikos*] see e.g. *Ars Med.* 19: I 353, and *Loc.Aff.* I 1: VIII 14: 'skill-based conjecture, which lies in the middle between exact knowledge and complete ignorance'.
20. *MMG* I 1: XI 3-4; cf. *MM* I 5: X 40. On division, see Barnes (1991, 65-7).
21. *MM* II 3: X 86.
22. *MM* I 8: X 65. Galen also wrote a special treatise *On Differences of Symptoms* (*Symp.Diff.*) (VII 42-84).
23. *MM* II 3: X 89-90.
24. *MM* II 6: X 121-2, with the comments by Hankinson (1991b, 199-200).
25. On the different kinds of fevers and their corresponding treatment see *MMG* I 5; Galen also wrote a special treatise *On Differences of Fevers* (*Diff.Feb.*) (VII 273-405); on different kinds of inflammations see *MMG* II 1.
26. On *diorismos* in Galen see van der Eijk (1997), and von Staden (1997).
27. For the difficulty of making such determinations see also *MM* III 3: X 181-2.
28. *MM* I 5: X 41.
29. *MM* I 8: X 63-67, and I 9: X 70.
30. *MM* II 1: X 80-1.
31. Cf. *MM* I 3: X 50; I 7: X 61-3.
32. *MM* I 7: X 50-2, 54-5, 57-61.
33. *MM* I 7: X 56.
34. E.g. inflammations (*phlegmonai*), of which Galen distinguishes several different kinds: cf. *MMG* II 1: XI 72.
35. *MM* X 7: X 49-50.
36. *MM* I 4: X 32 K.
37. See Hankinson (1998a, 23-7, 43-5); and see ch. 8 (Hankinson) in this volume, pp. 229-33.
38. *MM* IV 3: X 242-9.
39. *MMG* I 15: XI 47.
40. In this respect, Galen follows a criticism already voiced by Diocles, fr. 176,29-37 (van der Eijk, 2000).
41. For a discussion of Methodist use of *endeixis* see Pigeaud (1991, 15-18), and Gourevitch (1991).
42. See e.g. Kudlien (1991); Barnes (1991, 98-100); Hankinson (1991b, 202-6).
43. *MM* II 7: X 126 K.
44. See: *Inst.Log.* I.11; *MM* II 34: X 102; II 5: X 104; III 1: X 157; VI 4: X 421-2; XIII 7: X 897ff.; *In Hipp.Epid.* VI 1 2: XVIII 814.

45. See *MM* III 3: X 181, 183-6; III 7: X 204-8.
46. *MM* III 1: X 157ff.; III 3: X 181-3; III 7: 205-8; VI 2: 387-9; XIII 15: X 909.
47. Praxagoras: frs. 26-8 Steckerl (1958); Herophilus: frs. 144-88 von Staden (1989).
48. Diocles, fr. 56 van der Eijk (2000), with the comments in van der Eijk (2001, 122-4). The idea, if not the slogan, is also present in the Hippocratic *de Arte*, chs. 9, 11.
49. Galen remarks that if he could determine the patient's individual *idiosunkrasia* exactly, he would be Asclepius: *MM* III.7: X 207, 209.
50. See *MM* II 6: X 121-2. These imbalances consist in an excess of the individual qualities hot, cold, dry, or wet, or in an excess of hot-and-wet, hot-and-dry, cold-and-wet, or cold-and-dry.
51. On the organization of *MM* see Nutton (1991, 6-8); it is important to note that in ancient medicine, fevers were generally considered to be diseases in their own right, possibly accompanying other diseases, rather than symptoms.
52. Or, as Daremberg (1856) translates, 'complications'.
53. *MMG* I 9: XI 65.
54. Cf. *Cur.Rat.Ven.Sec.* 13: XI 290; for more on contra-indication, cf. *MM* X 1: X 661-5.
55. For useful surveys of Galen's surgical therapies, see Mani (1991); on pharmacological treatment, see Harig (1974).
56. For discussions of this see Boudon (2002b). And see ch. 12 (Vogt) in this volume.
57. See Brain (1986); on venesection in Diocles see frs. 155-157 vdE and the comments in van der Eijk (2001, 292-5).
58. *Cur.Rat.Ven.Sec.* 12: XI 284; see the discussion by Brain (1986, 129-30).
59. *Cur.Rat.Ven.Sec.* 12: XI 285.
60. *San.Tu.* I.1: VI 2, and I.5: VI 13-15. See Wöhrle (1990, 217-19).
61. *San.Tu.* I 15: VI 78; cf. *Ars Med.* 1: I 308; see Wöhrle (1990, 227-8).
62. For a similar, though not quite identical division see *Ars Med.* 23: I 367.
63. Galen gives the example of a certain Antiochus, who was a doctor himself and who kept practising and visiting patients until well into his eighties. There is also the amusing anecdote in *On Marasmus* (*Marc.*) 2: VII 670-1, about the philosopher who claimed to have a cure for ageing; but when he ended up looking like the Hippocratic *facies*, contended that it would have worked if he had taken it early enough. It may be added that Galen himself, according to Nutton's revised biography, reached the age of at least eighty-one.