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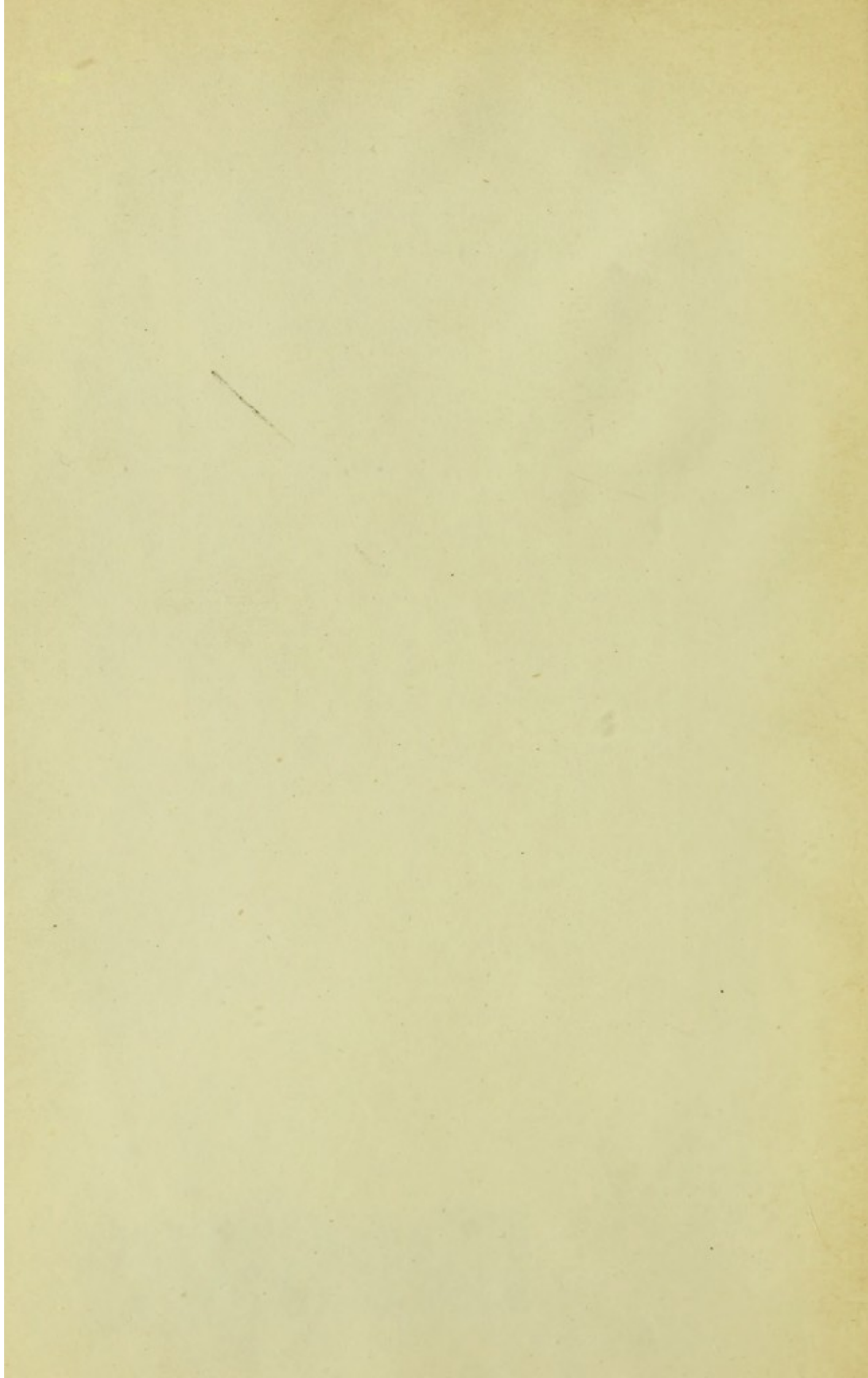


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PRACTICAL OBSERVATIONS

ON THE

HARROGATE MINERAL WATERS.

PRINTED BY R. ACKRILL,
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DR. SHERIDAN MUSPRATT, M.D., F.R.S.E.,

THE DISCOVERER OF

THE CHLORIDE OF IRON SPRING.

Photographed from Life by T. & J. Halroyd, Harrogate.

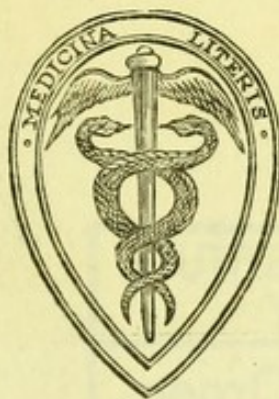
PRACTICAL OBSERVATIONS
ON THE
HARROGATE MINERAL WATERS.

WITH CASES.

BY

ANDREW SCOTT MYRTLE, M.D. & L.R.C.S.E.,

MEM. OF THE MED.-CHIR. AND OBST. SOCS., EDINBURGH; CORRESPOND. MEM. OF
MED.-CHIR. SOC. OF GLAS., ETC.



Second Edition, with Additions.

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TO

GROVE BERRY, ESQ.,

MY PREDECESSOR, GUIDE, AND FRIEND,

IN TESTIMONY OF

HIS SKILL AS A PHYSICIAN, HIS WORTH AS A MAN, AND

VARIED ATTAINMENTS AS A SCHOLAR,

THE FOLLOWING PAGES ARE GRATEFULLY INSCRIBED

BY

THE AUTHOR.

PIERAGE

OBITUARY

The death of Robert [Name] is one which has been
widely mourned in this community. He was born [Date]
and died [Date] at his residence in [Location].
He was a member of the [Organization] and was
well known to all who knew him. He was a
man of high character and a true friend.
He was survived by [Family Members].
Funeral services will be held at [Location] on [Date]
at [Time]. Burial will be in [Location].
The family requests that friends refrain from
bringing flowers to the funeral. Contributions
may be made to the [Organization] if desired.
The family is deeply indebted to the [Organization]
for their kind and sympathetic attention to
the funeral arrangements. Special thanks are
extended to [Name] for his kind and
valuable assistance.

PREFACE.

THE subject of mineral waters is one which has in all times received more attention from the sick themselves, than from the fraternity of the healing art. People suffering from long-continued illness will get tired of the ordinary means of cure, and try the extraordinary. Hence flourish all species of quackery and systems of humbug. These failing to afford relief, many resort to mineral springs, and it is for the purpose of showing the propriety of adopting this course before wasting time and money on quack nostrums and homœopathic nonentities, that I now proceed to give my experience of the value of Harrogate waters as therapeutic agents. In doing so, I lay my account with being charged with partiality and one-sidedness ; but a few facts will enable me to bear the imputation ; and among these are the following :—

Patients return regularly to Harrogate, year after year, for twenty, thirty, aye forty years ; I know cases that never miss their three or four weeks of Harrogate water. The inhabitants, especially the older residents,

rely on the waters whenever they suffer from symptoms of dyspepsia, biliary or renal derangement, gout or rheumatism; and last of all, I, whenever I find a case of disease in my resident practice suitable to treatment by the waters, resort to them in preference to all other drugs.

By the narration of a few cases, I trust to be able to point out the class of patients most likely to be benefited by a visit to Harrogate, and also to show practically the way in which the waters act in such cases.

HARROGATE, *April 17th, 1867*

PREFACE

TO THE

SECOND EDITION.

TWO years have elapsed since the first edition of this treatise was published. Since then I have felt more and more the necessity of such a work as the present, as the knowledge of the resources of Harrogate is only beginning to spread among members of the medical profession, upon whose minds the fact is slowly but surely dawning, that patients requiring special treatment by hydro-therapeutic measures, need not be sent to foreign spas for that purpose, but can enjoy all the advantages of *very different* and *opposite* mineral springs at one place, saving thereby *time*, and to those who are not over rich, what ought always to be considered—*money*. In the most recent work “On the Baths and Wells of Europe,” by Dr. Macpherson, of London, we find it written—“Harrogate, with the most *important* drinking waters in England, and therefore mentioned here at somewhat disproportionate length has kept up its reputation ever since it was discovered ;”

and in speaking of the cases suitable for treatment there: "Who can fail to observe that these are exactly the same class of cases that benefit so much at Homburg and Kissingen." Also, in speaking of the small amount of iron in most chalybeate springs, the same author says: "It might be *possible* to give *more* iron by using such wells as the Arapatak and the *strong Harrogate*," meaning Dr. Muspratt's chalybeate—to whom the medical profession, the people of Harrogate, and the many patients who recover health and strength by the use of the spring so well known by his name, owe a debt of gratitude for his disinterested and untiring efforts to make his discovery so widely known, in order that its benefits may be as widely spread.

I know there are many of my professional brethren who laugh at mineral waters as means of cure; but I also know that no one remedy has had such a long uninterrupted run of patronage, both as regards the general public and the most enlightened physicians, in all ages and in all countries; and, therefore, I feel assured that the high reputation which Harrogate and many other spas have held since they were discovered, will be maintained to the end.

HARROGATE, *April 17th*, 1869.

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CHAPTER I

THE HISTORY OF

1780

The first part of the history of the world is the history of the human race, from the beginning of the world to the present time.

1781

The second part of the history of the world is the history of the human race, from the beginning of the world to the present time.

CHAPTER II

The third part of the history of the world is the history of the human race, from the beginning of the world to the present time.

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The thirteenth part of the history of the world is the history of the human race, from the beginning of the world to the present time.

The fourteenth part of the history of the world is the history of the human race, from the beginning of the world to the present time.

The fifteenth part of the history of the world is the history of the human race, from the beginning of the world to the present time.

OPINIONS OF THE PRESS.

“ It is a frequent source of complaint, and one which is not ill-founded, that metropolitan physicians are apt to overlook the value and efficacy of the British mineral springs, in favour of the foreign sources. Bath, Buxton, Cheltenham, and Harrogate especially, possess springs of which the remedial influence is potent and incontrovertible. Dr. Myrtle does justice to the value of Harrogate waters in the treatment of dyspepsia, biliary or renal derangement, gout, &c. ; and *brochures* such as this serve usefully to remind practising physicians of the hydro-therapeutic resources of our own country.” — *British Medical Journal*, Sept. 21, 1867.

“ We find in this little volume an agreeably-written account of the uses of the mineral waters which have rendered Harrogate so famous. Originality is scarcely to be looked for in a small and unpretending book of this kind, but Dr. Myrtle’s remarks on “Jaded Brains” are well worth reading by any practitioners who are consulted by people living and working year after year in our large cities. Mineral waters are perhaps, in England, in danger of being too much neglected. Continental physicians place much greater reliance than we do upon them as remedial agents, and we think they might be resorted to with advantage in many obstinate cases which are suffered to linger on without trying them.

“ Many people fancy there are no really potent springs in England. It cannot be too often repeated that no spa of its kind is superior to Harrogate, and that, where sulphurous waters are indicated, it is a work of supererogation to leave England in search of them. We are glad to find that Dr. Myrtle is not extravagant in his estimate of the virtues of Harrogate water,

but speaks with that calmness and prudence which all rational physicians should cultivate." — *Medical Press and Circular*, Dec. 11, 1867.

"It is much to be regretted that so little science is brought to bear upon the question of the use of mineral waters in the treatment of disease. It would be difficult to name a subject which is less understood by the mass of practitioners in our country; yet the virtues of mineral waters, used judiciously in their natural state, are daily becoming more apparent, and the profession consequently cannot but be indebted to those who point out the indications for their use, and honestly seek to afford reliable information by carefully analysing the details of their experience, and committing the result to print. We have very much reason to think that England can supply all that the famous continental watering-places are supposed exclusively to possess in the matter of mineral springs. This is a very important consideration indeed in an economic sense for patient and physician, and it shows the necessity of giving every possible publicity to written opinions on the subject. Dr. Myrtle has penned a good book on the Harrogate waters. He describes the physical characters of Harrogate; the general characters of the waters; gives analytical tables of them; details their effects, and the cases best suited for their use: points out the best time of year for sending patients to Harrogate, and other matters of interest. His remarks on Jaded Brains, "*the disease of the age*," are suggestive, and worthy of perusal.

"The practitioner will find in Dr. Myrtle's book every information that he needs to possess on the subject of Harrogate and its waters, and we commend it to the notice of medical practitioners, as placing them in the possession of knowledge which too often receives more attention from the sick than from the profession — a state of things that conduces to the great success of quackery.—*Lancet*, July 6, 1867.

PRACTICAL OBSERVATIONS
ON
THE HARROGATE MINERAL WATERS,

CHAPTER I.

INTRODUCTORY REMARKS.

THE gist of the following pages constituted the subject matter of two papers which were read by me before scientific societies composed of members of my own profession; at first I never contemplated that they should put on another garb, and in the form of a treatise be offered to the public; and it is at the repeated and urgent request of many of my friends and patients that I now venture to address the general reader.

Some may deem the observations I have to make upon the waters of Harrogate uncalled for, believing that their merits have been sufficiently brought forward by previous writers, and point to the books extant in

support of their faith. To such I would simply say that my remarks are not intended to subvert those of my predecessors, but to supplement them ; and I think this is all the more necessary because I find that in the most recent scientific work upon the Spas of Europe, that of Dr. Althaus, whilst he devotes pages to the description of springs, infinitely of less importance than our mild sulphur water, when treating of Harrogate only gives Dr. Hofmann's analysis of the old sulphur and the Montpellier strong sulphur waters—he seems to be ignorant of the existence of its other and no less valuable springs ; he then sums up—I shall give his own words ; here is all he says : “ These waters are distinguished by the large amount of sulphuret and chloride of sodium they contain, and are suitable for all cases in which other muriated and sulphurous springs are employed.” We must remember Dr. Althaus is a German ; and as a set off to his partial notice, I shall now state the opinion of the greatest medical writer of this age, upon the importance he attaches to our mineral waters ; and this opinion was formed after he had visited and personally inspected the different springs. Dr. Copland, in his recent work on consumption and bronchitis, whilst speaking of the efficacy of sulphurous waters in certain stages of these diseases, says : “ I consider Harrogate to be, as respects air, soil, climate, and mineral springs, by far the most *important watering place* in this country, and *unequaled*

by *any* on the continent of Europe, for the diversity and curative influence of its waters in a large number of diseases. So diversified are these springs, and yet, individually, so constant in their composition, so entirely free from any contingent change or artificial admixture—so entirely the products of deeply-seated sources—that it becomes necessary, but by no means difficult, to arrange them so as to employ them appropriately to the constitution and temperament of individuals, and to the peculiarities and stages of a wide range of diseases.”

It may be proper to state here that this essay is not intended for the edification of the public alone, but also that, in a measure, it may serve as a guide to my professional brethren ; its tone, therefore, of necessity must be medical ; at the same time, I trust not so deeply medical as to prevent any one getting at my meaning. To the professional reader, I may state that I well remember how thoroughly ignorant I was regarding the nature and therapeutic uses of mineral waters before circumstances compelled me to make them my special study. Since then I have learned that my ignorance was, and is, shared by the great majority of our profession, who, notwithstanding the number of books which have been written upon the various spas of this and other countries, have shown little desire to become acquainted with their merits, and as a rule allow the patient or the patient's friends to take the initiative in recommending their trial. Under these circumstances,

and considering that the nature and properties of our own mineral spas are less known than many of their continental sisters, in every respect inferior to them as curative agents, I trust the remarks I am about to make may at least serve to elucidate the qualities of the springs with which I am best acquainted. Moreover, from the fact that previous to my settling in Harrogate I was engaged in practice for fifteen years, when I employed the ordinary materia medica at my command in the treatment of disease, I am enabled to make a comparison in many cases regarding the merits of the respective systems. And surely, after ten years' experience in the management of a very large number and as great a variety of cases by any special plan, it cannot be uninteresting or unprofitable to inquire into the results, and ask the questions,—Is this system followed by a greater or less amount of good than the ordinary method? Is the trouble, inconvenience, and expense, attending the removal of my patient to a watering place for the relief of such and such symptoms, to be compensated by benefits, present or prospective, sufficient to warrant my sending him thither? And it is to assist you in answering these question, as far as Harrogate is concerned, that I now proceed to make the following practical observations on its mineral waters. *En passant*, let me ask you to bear in mind that no case of acute form of disease, no matter whether of the skin, fibrous tissues, or internal organs, should be sent to

Harrogate or any watering place. These favoured spots are for the relief of chronic ailments, and the more chronic the better—cases like that of the *soi-disant* clergyman, who, after curing his own throat or stomach, at once, for the consideration of thirteen stamps, proceeds to cure thousands of sufferers whose throats and lives have been despaired of for the space of 24 years, and who by his aid are at once made to feel the inestimable blessings of health. Joking apart, it is a fact that mineral waters frequently exhibit their happiest action in the most unpromising cases as regards chronicity—especially when there is an *absence* of serious organic lesion, or the *presence* of a dyscrasy (meaning ill-humour or blood distemper); for instance, cases complicated with gout or struma.

To the non-professional reader, let me say a few words. Having come so far, do not suppose you have only to drink and be whole. Harrogate is no Pool of Siloam; it possesses no miraculous properties; and its waters require to be administered not only with a thorough knowledge of their nature and power, but with an equal knowledge of the fitness of the patient for their exhibition; and few patients, even when doctors are the patients, know what is best for them. If your own medical man has been unable to advise you as to the water most suitable for your case, do not experiment upon yourself, or drink this or that, because Tom, Dick, or Harry are drinking it, but consult one of

the medical men of the place. I recommend this step in all honesty, and without fear that in doing so I shall be misunderstood. By adopting that course you will receive the greatest good in the shortest time. Such is my experience, and the reverse has been the experience of hundreds of visitors who have taken the waters at their own hands. It is no unfrequent occurrence to find that, even under the best advice and strictest care, patients get wrong whilst drinking all mineral waters ; sometimes they seem to develop the evil that may happen to be lurking in the system, so that a bilious, or gouty, or rheumatic subject becomes, for a time, more bilious, gouty, and rheumatic with each dose of water ; and it requires prompt and judicious steps to be taken, so as to bring, as it were, good out of evil. The same remark holds true regarding the outward application of mineral waters ; and many a patient has cause to repent his having had recourse to the warm sulphur bath, when, for reasons which *he* could not comprehend, but which would have been readily recognised by a medical man acquainted with its properties, he ought not to have resorted to it at the time he did.

CHAPTER II.

PHYSICAL CHARACTERS OF HARROGATE.

FOR a general description of the town and neighbourhood, I must refer you to any guide book. I may observe, however, that the air and climate from the beginning of May till the end of October is all that the invalid can wish, from the fact that Low Harrogate is situated in a basin eighty feet below High, and is surrounded on all sides, so as to afford protection from prevailing winds; it is much milder than High, which, standing on an open plain 400 feet above the sea's level, affords a constant breeze, even in the hottest of the dog days. The air of both, like that of Nice,* sometimes proves to a few highly susceptible individuals too stimulating, inducing sleeplessness, loss of appetite, and general nervous irritability, with marked febrile symptoms. Fortunately, its purity has a very different effect upon most people, enabling them to do more with less fatigue, and giving them a feeling of buoyancy and elasticity to which they had long been strangers.

* Many of my patients state that the climate of Cannes resembles Harrogate more than any other health resort in the south of France

One of the greatest advantages Harrogate possesses as regards climate is attributable to its being so far inland ; equidistant from the sea, on the east and west coasts, it is more genial than the former and less relaxing than the latter, and offers to all invalids who do not agree with sea air, climatic conditions of the utmost importance, and such as few other health resorts in England possess. Besides being favourably situated geographically, its atmosphere is not polluted by the smoke of public works or neighbouring towns ; the beneficial effect of this is shown in the feeling of relief from a sense of languor and oppression experienced by many, who return to it after business hours, from towns like Newcastle, Leeds, or Bradford. And not only so : the health of such is so greatly and permanently improved by spending half their time in this pure air, that it is now a favourite residence with them ; and many of them assure me that their families now enjoy a freedom from sickness which they never knew before.

Harrogate is very favourably dealt with in respect to its construction ; it is really a village ; its buildings are detached, and even its streets are exposed to the most perfect system of ventilation ; hence, I believe, arises its immunity in a great measure from diseases of an endemic and epidemic character, such as typhus, typhoid and gastric fevers, malignant cholera, and diphtheria. It is to this peculiarity we must also attribute the fact, that children coming from infected districts, and

during their own convalescence from scarlet fever, small-pox, or hooping-cough, rarely (if they do bring the seeds of these diseases with them) are the means of infecting others. Another remarkable fact, speaking clearly as to the healthiness of Harrogate, was found in its exemption from the rinderpest. When cattle were dying in dozens of the plague within two miles or less of the plateau upon which Harrogate stands, not a single case of the disease occurred in it; and this was all the more remarkable, as before the stringent orders of the Privy Council were issued preventing the transport of cattle, I have seen herds crossing the Stray on their way to Knaresborough, having animals so affected with the plague, that they died before they reached their destination.

Harrogate has yet two other advantages; the one being good drainage, the other pure water. The former has been carried out at great cost, and is now perfect; the other has been supplied to the town for some years, and for purity and agreeableness equals the Ilkley and Malvern springs. Every house in the town ought to command a supply of what is known as the town's water, in distinction to pump water; not that the latter is unfit for all ordinary purposes, but because it is very commonly slightly chalybeate, and thereby apt to cause unpleasant symptoms wherever there is irritability of the mucous membrane, or intolerance of iron from peculiarity of idiosyncrasy. I have met with

several cases of illness which were clearly traced to the regular use, for domestic purposes, of water impregnated with oxide of iron. There is a mere trace of iron in that supplied by the water-works company; * it is therefore highly desirable that that water should be found in every house. There is one obstacle to this: it is high in price—too high at present. Still if there were more consumers, there would be lower rates, as the supply of the article is most abundant and regular; and the cost of bringing it to Harrogate cannot be increased by its more general distribution. This water is brought from springs in Haverah Park, and is stored in well-constructed reservoirs, the hydraulic pressure from which is so great, as to insure a full and free supply of water at the top of the highest house in the district supplied by the company's pipes. During the uninterrupted and continued droughts of 1867 and 1868, Harrogate was well supplied with water for all purposes private and public. When most other towns were put on an allowance and all waste of water strictly prohibited, Harrogate experienced no lack of this prime necessary of life and comfort.

*Dr. Muspratt has analysed this water, and pronounces it to be of excellent quality as regards domestic purposes. The price of this water has been somewhat moderated.

CHAPTER III.

GENERAL CHARACTER OF THE WATERS.

IT would be a mere waste of time were I to give a detailed account of all the different springs in use, or present the reader with even analytical tables of them; accordingly, I shall select as specimens six of the most characteristic of the various groups; and in treating of the therapeutic action of any water, I shall speak of it as a whole, and not attempt to apportion to each salt its curative value. Some writers have done so, attempting to show that the different salts in mineral waters meet with as different salts in the blood and tissues of the patient, and this leads to a series of chemical changes alike scientific and satisfactory. Chloride of calcium in a water is represented as meeting with the phosphate and carbonate of soda in the blood; double decomposition is supposed to take place; and you have chloride of sodium on the one hand, phosphate and carbonate of lime on the other—the earthy constituents of bone; *ergo*, such a water must be valuable in rickets. My knowledge of the action of remedies cannot carry me so far as this; and I am of opinion that the views regard-

ing the chemical changes above described, may be as erroneous as is that pathology which attributes the rickety diathesis to a want of earthy matter in the bones, or supposes it could be remedied by supplying any amount of such from without.

I have no doubt in my own mind that it is impossible to estimate the relative value of the different active ingredients of such a compound medicine as the sulphurous or saline chalybeate waters. These seem to be so combined in their natural state as to produce in their action a uniformity of adaption to the requirements of certain diseased conditions which cannot be affected by the artificial combination of their chemical elements. I have heard medical men say, "We have all the constituents of your mineral waters in ordinary medicines, and can administer them in such proportions and combinations as we think advisable." All very true. You may make an artificial mineral water to look, taste, and smell like the real, but you cannot get it to *act* like it. I have tried the experiment, and there is as much difference between the two in therapeutic value as there is between the relative value of any real article and its imitation; and this is shown daily in the improvement brought about by the action of mineral waters, when medicines, having chemically the same peculiarities, have failed in the end for which they were prescribed. Why it should be so I do not pretend to be able to explain: but that in no way militates against the simple

fact that it is so. Here, as elsewhere, in watching the effect of remedies, we are unable to explain the mode of action; but we are not thereby prevented coming to a correct conclusion as to the results of that action.

All the waters of Harrogate have certain features in common. They are essentially cold springs, exhibit little variation of temperature, show more or less alkaline reaction, and, like other mineral waters, have undergone slight changes, both as regards the quantity of their chemical ingredients, and in more than one instance the very nature of some of them. Mr. Davis, druggist, Harrogate, who has devoted much time to the analysis of these waters, remarks that—"Since 1854, when Dr. Hofmann analysed them, the sulphur waters must have undergone remarkable changes, inasmuch as the sulphate of lime has disappeared from them, and there are now present salts of baryta, strontia, and lithia. From the universal presence of the last-named salt in all the waters of the district, we may reasonably infer that it has always been there, but was not detected till the spectroscope (a recent invention) proved its existence."

The Kissingen or Montpelier Spring seems to have undergone similar changes; but by far the most remarkable alteration has taken place in the chloride of iron spring, or what has justly been called Dr. Muspratt's Chalybeate. Here, besides the appearance of the salts above-named, we have large quantities of the

protochloride and protocarbonate of iron, as discovered by Dr. Sheridan Muspratt, College of Chemistry, Liverpool; and chloride of barium, discovered by Dr. Miller, King's College, London, in 1865; salts which were not found in water taken from the same source, although examined in 1854 by Dr. Hofmann. Here I cannot help remarking that several of the changes above described are for the better. Some of them may be more imaginary than real—that is to say, the salts might have been found in the water by former analysts had they been looked for. To Dr. Muspratt, however, is due the sole merit of establishing the nature and value of the chloride of iron spring; and his discovery was so unexpected, and so thoroughly at variance with established beliefs, that at first it was looked upon with doubt. That doubt was properly acted upon by subjecting the water to the analysis of Dr. Miller on the part of the proprietors of the spring, and Dr. Herapath, on the part of Dr. Muspratt; and it must prove a satisfaction to every one to know that these three eminently scientific chemists came independently to the same conclusion—a conclusion which exhibits Harrogate in a new light and shows that it can boast of possessing the richest, the rarest chalybeate water which has ever been subjected to the test of chemistry.

From the fact that the most important of the sulphurous and saline chalybeate waters show the same temperature (ranging from 40° to 48°) summer and

winter, flow at the same rate (whether there has been a very wet or dry season), and hold an uniform amount of salts in solution, we conclude that they must have their origin in collections of water at a considerable depth. The pure chalybeate waters spring from sources less deep, and are influenced by the rain-fall to a perceptible degree. In the very long droughts of 1864 and 1865, one spring was every now and again dry, showing that it depended to a very considerable extent on meteoric supplies for its existence.

CHAPTER IV.

CLASSIFICATION OF THE HARROGATE WATERS.

DOCTOR HOFMANN, after a careful analysis, divided them into four classes—

- The Strong Sulphurous.
- „ Mild Sulphurous.
- „ Saline Chalybeate.
- „ Pure Chalybeate.

The following are the analysis of six of the principal springs, and represents the amount of saline constituents in an imperial pint of water :—

SULPHUR WATERS.

GRAINS OF SALINE CONSTITUENTS IN THE PINT OF WATER.

	Old Sulphur Well.	Montpelier Mild Sulphur Well.	Hospital Mild Sulphur or Magnesia Well.
Sulphate Lime . . . . .	.022	1.513	.152
Carbonate Lime	1.545	2.557	2.475
Fluoride Calcium	trace	trace	—
Chloride Calcium	10.217	—	—
Chloride Magnesium	6.961	2.142	.042
Carbonate Magnesia	—	.406	1.290
Chloride Potassium	8.087	.497	3.121
Chloride Sodium	108.272	29.051	27.578
Bromide Sodium	trace	trace	trace
Iodide Sodium	trace	trace	trace
Sulphide Sodium	1.935	.424	.037
Ammonia	trace	trace	trace
Carbonate Iron	trace	trace	trace
Carbonate Manganese	trace	trace	trace
Silica . . . . .	.030	.020	.186
Organic Matter	trace	trace	trace
Total	137.069	36.610	34.861

CUBIC INCHES OF THE GASES IN THE PINT OF WATER.

Carbonic Acid	2.75	1.78	1.27
Carbide of Hydrogen . . . . .	.73	.11	.66
Sulphide of Hydrogen . . . . .	.66	—	—
Oxygen	—	—	.22
Nitrogen . . . . .	.36	.96	.72
Total	4.50	2.85	2.88

SALINE CHALYBEATE, AND CHALYBEATE WATERS.

GRAINS OF SALINE CONSTITUENTS IN THE PINT OF WATER.

	Kissingen or Mont- pelier Saline Chalybeate.	Dr. Mus- pratt's Chalybeate or Chloride of Iron.	Tewit Well.
Sulphate Lime	—	—	·087
Carbonate Lime	—	—	·179
Carbonate Magnesia . .	5·224	—	·333
Carbonate Manganese . .	trace	—	trace]
Oxide Manganese	—	trace	—
Carbonate Potass	—	—	·132
Chloride Calcium	19·909	17·303	—
Chloride Magnesium . . .	4·454	10·548	—
Chloride Sodium	82·104	25·740	·035
Chloride Potassium . . .	1·423	·480	·165
Chloride Lithium	trace	bare trace	trace
Chloride Barium	—	·847	—
Chloride Iron	—	1·811	—
Carbonate Iron	·373	1·452	·169
Bromine, Iodine, Ammonia	traces	?	traces
Silica, Organic Matter . .	traces	traces	·213
Total	113·487	58·181	1·313

CUBIC INCHES OF THE GASES IN THE PINT OF WATER.

Carbonic Acid	3·02	3·28	1·48
Carbonetted Hydrogen . .	·30	—	—
Oxygen	·06	—	·05
Nitrogen	·81	1·01	·69
Total	4·19	4·29	2·22

Of the Strong Sulphurous.—I shall take, as an example of this class, the old Sulphur Well—the Harrogate water *par excellence*. On looking at the table of its constituents, one is struck with the large amount of chlorides it holds in solution, and with its general resemblance to sea water; consequently its physiological action in some respects resembles that of its great prototype, for when taken in small doses, it creates thirst; in larger, it excites nausea, vomiting, and purging, just as sea water does; by reason of its containing less chloride of sodium and no sulphate of magnesia, it is less of an irritant; and from its being impregnated with the chloride of calcium and sulphide of sodium, it possesses physiological and therapeutic properties which sea water does not, and which enable it to act in a special manner upon the lymphatic, glandular, and nervous systems, thereby promoting certain metamorphological changes in those tissues of the body which have become the seat of abnormal deposits.

The physiological action of this water is therefore stimulant, aperient, deobstruent, alterative, and specific.

As a stimulant, it acts first on the nerves of the stomach, and through them on the capillaries, increasing the secretion of the mucous follicles; in like manner it acts throughout the whole alimentary canal. It also exerts the same influence on the bronchial membrane and the skin; but the organ it stimulates

with the most certainty is the liver, for not only does it excite it to throw off more bile as an ordinary cholagogue, but it seems to promote a healthier activity of its other functions, which are necessary to the perfection of the processes of digestion and assimilation.

As an aperient, it acts effectually and agreeably, producing copious evacuations without nausea, griping, or exhaustion. This action is not confined to one portion of the bowel, but seems to cause a general emptying of both small and large intestines ; hence its great value in all cases where there is constipation with obstruction to the circulation of the portal system.

As a deobstruent or resolvent, it promotes absorption. In proof of which I may instance the rapid consumption of the fatty tissues of the body in those who, like Banting, have a decided tendency to obesity, and in the softening and gradual reduction of glandular indurations and gouty and rheumatic swellings during its use. I must also add that I have in several instances observed chronic hypertrophy, as well as simple congestion of the uterus, slowly subside under its influence ; and doubtless it is to that fact that it owes its reputation for removing sterility as well as for facilitating the function of menstruation.

As an alterative, it acts principally on the mucous surfaces and skin, promoting a healthier condition of both by modifying and regulating their secretions, as is well shown in the rapid improvement which it effects in

cases of chronic catarrh of the stomach and bowels, and in those forms of dyspepsia which are caused by an irregular supply or vitiated condition of the gastric juice.

As a specific—I speak of its specific action, because I am satisfied that I have observed effects produced by it which I have never seen follow, with such uniformity, the administration of any other remedial measures, and because I am convinced that in certain cases it cures upon a principle, as special or peculiar to it, as is that principle which gives to quinine its anti-periodic character, and entitles that alkaloid to rank as a specific against diseases, observing in their course marked periods of exacerbation and remission; this specific action is manifested in the control it exercises over various cutaneous diseases. In certain forms of dyspepsia, but principally in the power it has over old-standing hepatic disorders, where we can scarcely say whether the case is one of functional or organic mischief.

The general action of this water is decidedly weakening, and a common complaint among those who have taken it either too long, or in too great a quantity, is a feeling of being pulled down, or good for nothingness; at the same time, I have never found it act so strongly in this way as the ordinary saline aperients generally resorted to, such as the sulphates, citrates, and tartrates of magnesia, potash, and soda, a common form of which you have in the Seidlitz powder. This may be easily accounted for, in the conservative action of the

chlorides, compared with the searching action of the sulphates, etc. I am satisfied of this, because many patients, who tell me they cannot stand anything of the nature of saline medicines, take the sulphur waters in medium doses, not only with comfort, but benefit, for weeks together. Sometimes cases, which at first sight one might readily suppose would be powerfully acted upon by moderate doses of the strong sulphur, resist its aperient action altogether, and, strange to say, respond to the mildest sulphur with the greatest readiness ; and herein Harrogate possesses peculiar advantages over most spas, in the extraordinary variety of its water. If one well proves unsuitable, there is another next door, or next again, that will meet your wants.

In ordinary cases, I seldom continue its regular use for more than from eight days to three weeks ; but, in extraordinary cases, cases requiring its specific action, I have observed not only the greatest tolerance of it, but an expressed liking for it, after it has been daily taken in full doses for weeks and even months, all the while the patient showing no signs of debility or exhaustion from its action, but the contrary.

If taken injudiciously, however, it frequently creates serious constitutional disturbances, characterized by loss of appetite, thirst, giddiness, drowsiness, intense, headache, biliary derangement, and fever—symptoms which have led to more than temporary inconvenience in subjects predisposed to disease, or affected with organic

lesions. Scarcely a year passes without some one paying a heavy penalty in this respect, and, considering the fool-hardy way in which some folk indulge in big drinks of the strongest waters, it is astonishing that more accidents do not happen. I shall give one as a warning. In 1866, a gentleman, above seventy, took large draughts of the old well before breakfast for several mornings; each morning he felt worse and worse. He then, without asking advice, took the Kissingen; after which he suffered from intense headache. In the middle of the night he was heard to open his bedroom door, and between six and seven I found him lying on the floor, dead: rupture of a blood vessel had taken place; and I have no doubt the weak coats of this vessel gave way from the heart having been unduly excited by the stimulating effects of the waters; and I have as little doubt that the accident might have been prevented, had ordinary caution been exercised, or had timely and proper treatment been resorted to, even the night before it occurred.

Administration.—Before commencing a course of this water, it is advisable to ascertain the habit and present state of the bowels, as, if there is any irregularity or approach to constipation, it is necessary, in the first instance, to remove such by suitable treatment. If this is not attended to, the chances are either that the water is speedily rejected, or, if retained, it only causes discomfort and disgust. It is also wise, if time permits, not

to begin with the water immediately after a long and fatiguing journey, when the stomach has been put out by improper or irregular meals. When the patient is feeble and unequal to much exertion, he has the water brought, fresh from the well, to his room, where, after drinking it, he takes what exercise he can.

If the digestion is weak, I invariably prescribe the water warm, as when taken cold it lies heavy on the stomach, and does not pass off so readily by the bowels, thereby causing nausea, with flatulant distention and headache. A pint to a pint and a half, taken in half pint doses, at intervals of fifteen or twenty minutes, beginning an hour or an hour and a half before breakfast, is generally sufficient to produce its aperient action. To secure its alterative or other physiological action, from two to eight ounces are taken cold three or four times a day; these doses seldom affect the patient visibly. One thing I must insist upon: a patient cannot take these or any mineral waters with benefit and continue at work; for the happy action of a mineral water there must be leisure, and as little mental anxiety as possible. Hence it is, I believe, that waters fail in producing the same effect when taken at home as they do when drunk at the source. Nay, more: I would ask how often, and to what extent, is the restorative action of all remedial means thwarted by this attempt to get well, and continue in harness at the same time.

CHAPTER V.

MILD SULPHUR WATERS.

THESE hold a very important place in the medical history of Harrogate. Few may be aware of the fact that whilst they are called mild here, and relatively are mild, they would become strong if contrasted with many of the thermal and cold sulphur springs of the Continent. They hold a larger amount of saline constituents in solution, and as much sulphur in the form of sulphide of sodium, as do the springs of Aix-la-Chapelle, of Borcette, and Baden. They also contain an equal quantity of gas with the waters of the two last-named spas. They are twenty times stronger, as regards salines, when compared with the waters of Barèges, Bagnères de Luchon, St. Sauveur and Eaux-Bonnes in the Pyrenees, all of which derive their power from their high temperature rather than their chemical ingredients.

On looking at the analytical table of the mild sulphur waters, you find that they present, in a minor degree, the chemical characters of the strong; and consequently we may expect them to show similar physiological properties. Except in such cases as I have already

mentioned, they are by no means equal to the strong as aperients; and for this very reason they become much more certain to act as diuretics and diaphoretics. They also have the same kind of specific power over certain diseases which I attributed to the strong, but in a lesser degree. They prove of the greatest value in cases where, from peculiarity of constitution or irritability of mucous membrane, the strong cannot be borne, and are then given in the same way and doses, with similar results. They are, however, much more frequently given in conjunction with the stronger waters, these being taken as an aperient before breakfast; the others as a corrective, alterative, or diuretic, at intervals during the day, in doses varying from four to twelve ounces.

The mild sulphur waters are slightly more alkaline than the strong, There are two springs showing this to a greater extent than the rest of this group. One of these is at Harlow Carr, the other at Starbeck, both recently analysed by Dr. Muspratt, and both are extensively prescribed, especially in the form of baths; but none of the waters of Harrogate hold anything approaching the quantity of alkali, which forms the principal feature in the springs at Vichy, Fachingen, Geilnau, or Neuenhr, containing as these do from 45 to 7 grains of the carbonates of soda, lime, and potash in the pint. These are truly acidulous (by reason of excess of carbonic acid) alkaline waters, and are thereby

useful in cases where that class of remedies is indicated. By reason of this very alkalinity, however, I think they require to be given with more circumspection than waters which are less so; for, be it remembered, that in a healthy state all our secretions are acid; and it is only when, by reason of imperfect and faulty digestion, the blood becomes charged, not only with a greater amount of acidity than it ought to contain, but a *different form of acid*, that alkalies are urgently demanded so as to combine with this new or excessive acid, forming a soluble salt, which can be easily thrown out of the system by its various excretories. This is very readily done, and in my opinion the danger is that it may be *overdone*; and it is to this that I attribute the fact, that many patients who have undergone repeated courses of the alkaline springs above-named, have derived more real benefit from a course of our mild sulphur water than they did from the use of the strongly alkaline waters of the Continent.

In all cases of dyspepsia, giving rise to those symptoms to which the name of lithic acid diathesis has been given, in certain forms of rheumatism, gout, and neuralgia, the mild sulphur waters exert a most beneficial influence, and show results equal to those obtained by a course of other mineral waters, justly celebrated for their success in the treatment of these affections. The Hospital mild sulphur or magnesia water is, perhaps, of all the wells in Harrogate, the

most popular ; partly because it is by no means an unpleasant beverage, and can be taken at all times, and in any quantity, but mainly because it acts with great regularity as a diuretic, and has the property of eliminating from the system uric acid and its salts. I have known many cases of gout and rheumatism which had resisted a prolonged course of hydropathy, as well as a fair trial of the mineral waters of Buxton, entirely cured by its means.

External Uses of the Sulphur Waters.—All of these are used externally in the form of lotions and baths. Their external use, however, is chiefly confined to cases of skin disease, hepatic, gouty, and rheumatic affections. For the first-named, the milder waters are most frequently resorted to, not [only on account of their being less impregnated with the chlorides, but because they are more alkaline, and thereby possess a softening and soothing effect upon the skin. The stronger waters are to be preferred in the other cases, as they act more powerfully as stimulants and derivatives. For bathing purposes, however, waters of the same strength as those which are drank are never employed, as they would prove too stimulating, and would soon engender cutaneous mischief, especially in cases where there was a tendency thereto. As it is, this not infrequently happens, by immersion being continued for a greater length of time or at a higher temperature than is proper. Doubtless, in certain highly chronic cases, this power

may be turned to advantage; and the old indolent disease may be converted into an acute active one, and so lead to a radical change in the condition of the parts affected, which will often terminate in healthy action. This plan is very often adopted on the Continent, where patients are kept under water at a rather high temperature for six, eight, and ten hours daily. This is especially the case at Leuk, in Switzerland, where the chief salt in the water is sulphate of lime; and the temperature as it issues from its source is as high as 125° . Here the favourite plan is to establish a crisis. The patient is so treated that between the fifth and twelfth day he is made to feel very shaky, the skin becomes covered with an eruption resembling erysipelas, accompanied by the sensation of burning and itching, with symptoms of constitutional disturbance of a feverish nature: and this artificial disease often lasts for a long time. The same train of symptoms can be induced by very free bathing in any of our sulphur waters at a high temperature, but they are by no means to be desired. I can conceive a case where such a course of treatment might be thought warrantable, but I have not yet met with one.

I am, moreover, convinced that anything like those symptoms, to which the name of crisis has been given, ought, if possible, to be avoided, as all the good which can be got from the use of a mineral water may be had without it; and I believe this opinion is becoming more and more general among medical men.

If mischief follows excessive bathing at too high a temperature, it is no less apt to follow moderate bathing at the proper temperature, *provided* it has been resorted to at the *wrong time*. I do not mean time of day, but period as regards the disease. I have frequently met with people who were highly dissatisfied with the results of their course of baths, when they ought to have been dissatisfied with their own stupidity or imprudence. There are stages, especially of skin diseases, that require much humouring in the matter of baths; and if this is not attended to, they resent the treatment in a manner most unmistakable. Moreover, unless the inside of the patient is brought into fair working order, you need not expect the outside to benefit greatly by anything you may apply to it in the way of baths or lotions. The great object, before resorting to these, is to ascertain the condition of the digestive organs and system generally: for if these are in a sluggish or unhealthy state, or if you have disease of the heart, lungs, blood-vessels, or brain, baths must not be indulged in at all, or under certain restrictions. Once in proper condition to commence bathing, it is astonishing to the patient, and no less gratifying to his attendant, to observe the real and often rapid improvement effected by a few baths; the skin then seems capable of responding kindly to the treatment, and in a short time is found performing its important function in a satisfactory manner.

Before going further, I must here protest against the poor accommodation and general get-up of all Harrogate bath-rooms. Too little attention is paid to the fitting up and furnishing; they even look uninviting. I am aware that the fumes from sulphur water have a tendency to blacken paints and papers, but these might be better chosen and renewed oftener. Carpets are also rapidly damaged by the same waters; but a large piece of cork at the side of the bath would last for ever, and be far more suitable than any carpet. Towels ought to be large and plentiful, of thick, soft material—not like pocket-handkerchiefs. You have an abundant supply of the most valuable water to fill your baths; do not let this suffice, and suppose it is all that is necessary. It is the *grand object* of the bath-room, but attention to other, although minor, accessories, ought to be fully given, so that the comfort of the bather may be thoroughly secured.

Good effects not always immediate.—The good effect of these waters is frequently not so much seen or felt during as after their administration. I have often been told by patients visiting Harrogate regularly that they feel better in health, and continue to improve long after they had given up drinking the waters; and it is this which induces hundreds to return year after year to undergo a regular systematic course of them. I consider this the strongest proof of their true value, for certainly it cannot be for the pleasure of drinking them,

or their immediate effects, that these visitors annually pay their respects to the wells. We also frequently find that patients who cannot afford time for a full course of the waters, and are consequently sent away before the curative process has been far advanced, report that their progress towards recovery goes on satisfactorily, and that they now respond to treatment which before had little influence over them. This has been especially noticed with regard to iron, arsenic, and cod-liver oil, in the treatment of skin diseases.

CHAPTER VI.

OF THE SALINE CHALYBEATE WATERS.

THE presence of these springs within a few yards of springs so opposite in constitution and properties as those we have just been considering is a most remarkable natural fact. It is more than that ; it is one of the highest value and import. By reason thereof we can treat to the end cases which, having been corrected and purified by a course of sulphur water, require to be set up and strengthened by a course of steel. Moreover, by their means we are enabled to deal with a large and daily increasing class of patients who could receive no benefit from our sulphurous waters. This cannot be too strongly insisted upon, as hundreds are annually sent to drink the waters of Homburg, Pyrmont, and Spa, who might receive as much benefit from the saline and pure chalybeates we have here. Like the sulphur waters, these are not so rich in gases as to entitle them to rank as sparkling ; still, they hold enough to make them agreeable when drank fresh, and insipid when taken after having been allowed to stand even for an hour or two, so that the gas has escaped. Whilst wanting in

gaseous properties, they are rich in far more important matters ; and if it were desirable, they might either be charged with carbonic acid gas, or taken with a small quantity of pure water so saturated. I have had the Kissingen and Dr. Muspratt springs converted into sparkling chalybeates by means of the ordinary gasogene, and thereby they became more agreeable to the palate, and, to a very weak stomach, easier of digestion ; but the process was too troublesome to be continued, as it entailed the carrying of the gasogene to the wells with all the necessary apparatus. The Kissingen water keeps very well when so treated, but the other undergoes slight decomposition when allowed to stand, even for six hours. At this I was greatly disappointed ; for if it had retained its natural characters by this means, it might have been exported, and thereby proved a valuable addition to the list of pharmaceutical preparations. This water is so sensitive of manipulation, that I have no hopes of ever seeing it prove very beneficial except when drank in a perfectly fresh condition.

Of this class I have furnished the analyses of two examples—the Kissingen (so called from its resemblance to the Ragozzi Spring) and Dr. Muspratt's Chalybeate or the Chloride of Iron Spring. The former holds the same salts in solution as the Old Sulphur Well, and in nearly the same proportions, differing from it in the substitution of the carbonate of iron for the sulphide of sodium. Its physiological action is, therefore, in a

great measure akin to the sulphur, modified by the presence of iron; it is accordingly more of a tonic, less of a depurant, conservative rather than eliminative, and possesses none of those properties peculiar to the sulphur water, which I spoke of under its alterative and specific action. This is a most valuable spring; holding a medium place between the sulphur and the Dr. Muspratt's Chalybeate, it gives to Harrogate great advantages in the treatment of many complicated and troublesome cases, and comes in with the best effect as a tonic aperient after the patient has been corrected, as regards his secretions, by a course of the sulphur.

It proves of the greatest use in all cases of constipation arising from debility or atony of the muscular coat, and co-operates with the more tonic chalybeate waters, where these have a tendency to lock up the bowels. In many cases of nervous dyspepsia, hypochondriasis, anomalous or atonic gout, certain stages and forms of eczema, and in chlorosis, this water is exhibited with the best possible results.

Its immediate effect is stimulating and agreeable; according to the quantity taken, it acts as an aperient or tonic; sometimes it proves much more potent as an aperient than the sulphur—when it is taken in full doses; and where it does not act upon the bowels, it passes off readily by the kidneys. Occasionally it remains like a weight on the stomach, especially if it has been taken cold, and the doses drunk in too rapid succession.

Whenever practicable, this water ought to be taken *cold*, however, as in the process of heating it becomes slightly changed, the iron being thrown down in the form of sesqui oxide.

Administration.—Two or three glasses, of eight, ten, or twelve ounces, taken before breakfast, at intervals of fifteen or twenty minutes, are generally sufficient to produce its aperient action. As a tonic, three, four, or six ounces, three or four times a day, are usually prescribed an hour before meals. In these quantities it proves a most valuable alterative tonic in strumous affections. Where iron is not so well borne, the chlorides come in with power, promoting a better digestion of all food; so that, with a richer *chyme* and *chyle*, you soon have evidences of healthier blood.

The Dr. Muspratt Chalybeate or Chloride of Iron Spring. This water contains eight times more iron than the Kissingen, and one-third less saline matter: it is, therefore, more of an analeptic, less of an evacuant.

Its real nature was only brought to light in 1865, by the careful analysis of Dr. Sheridan Muspratt, who discovered that the water held in solution 16 grains of the proto-chloride, and 12 grains of the proto-carbonate of iron, in the imperial gallon—an amount possessed by no known spring in this or any other country. Dr. Muspratt's analysis was fully confirmed by Dr. Miller, of King's College, London, as also by the late Dr. Herapath, of Bristol. The fact that this spring holds

the ferrous chloride in solution, in so large a quantity, renders it *unique*, and places it at the very top of the long list of British and Continental chalybeates. Nor is it too much to add that it is without an equal. This water, when drunk at the source (and it can only be taken with most advantage there) is cold, clear, and very slightly sparkling, has an agreeable strong saline taste, not unlike the water from a fresh oyster. After swallowing it, the strong styptic or metallic taste is evident, and remains in the mouth for a time. Its immediate effect is stimulating, many people remarking that they feel as if they had taken a glass of generous wine instead of mineral water. Some speak of its causing a glowing sensation in the stomach, followed by a feeling of comfort and support, whilst all describe the after effects as invigorating and strengthening in a marked degree. The curative value of this spring cannot be over-estimated, as its power for good in all chronic cases where iron is indicated is very manifest. The various forms of scrofula, whether of the system at large, or of special organs, may, by its means, be combated successfully. Chronic glandular swellings yield to its influence. It is especially serviceable in many forms of dyspepsia—in all functional derangements of the nerves, as tic, neuralgia, chorea, and most hysterical affections, and also in many cases of poor gout. I may add that I have never seen this water prove beneficial in diabetes mellitus, or fatty disease of the heart, although

I have found it useful in cases of Bright's disease of the kidneys, provided the structural changes in these organs had not gone too far. It is given in doses of from two to six ounces, three or four times a day. No water in Harrogate requires to be given with more circumspection than this, as it frequently proves not only most difficult of digestion, but is apt to cause several of the most painful physiological effects common to the ordinary pharmaceutical preparations of iron. This water ought always to be drunk at the pump, as it is so readily decomposed that the least motion or contact with the atmosphere renders it totally unfit for use.

As a proof of the sustaining effect of this water, I have observed that many patients cannot take their usual quantity of stimulants whilst drinking it regularly; and that on giving it up they feel a decided want, and have to exercise a certain amount of resolution in order to overcome the desire for a stimulant which the loss of the water has created. A little food, such as a biscuit, is the best thing to meet this want. In cases where wine is actually needed, then it ought to be allowed; but in no case where it can be dispensed with ought the mere feeling of *desire* for it prove a sufficient reason for its employment. I have used this water in a great number and variety of cases of debility arising from the most opposite causes, and I have had every reason to be satisfied with its effects. So visible are they, that

it is no uncommon thing for one patient to remark upon the improved look of another, adding, "I never saw anything like it." Why so? because the chloride of iron is found to be more readily assimilated than any other compound of the metal; and hence its power, hence its great value as a means of cure. Every now and again we meet with individuals who cannot take it without entailing upon themselves painful symptoms, just as we meet with people who cannot take opium without an attack of nettlerash, or quinine without a headache. The proper course to adopt, under these conditions, is to abandon the remedy; perseverance only leads to disappointment and disaster.

CHAPTER VII.

THE PURE CHALYBEATES.

THERE are many springs of this class in Harrogate, the principal being the Tewit, St. John's, and the Hospital Chalybeate, all of which are very much resorted to by visitors requiring ferruginous tonics; they possess similar qualities and properties to those of Tunbridge Wells, and, except in the small amount of carbonic acid they contain, are almost identical with the waters of Schwalbach in Nassau, and Spa in Belgium. They are peculiarly efficacious in the treatment of delicate girls suffering from functual derangement of health, and want of good red blood. These seem better able to appropriate the small quantity of iron in its subtle state of division in this class of chalybeate waters than any other; and to this fact I assign the cause of improvement upon such small quantities of iron as are found in these springs, when that mineral has failed to benefit to any extent when given in the cruder forms of our chemical preparations. I may mention that, although iron exists in such small quantity in these springs, I have had several patients who could not continue to take them, because they experienced the same un-

pleasant symptoms which they invariably had felt when iron had been prescribed for them. These waters are very pleasant to drink, and, therefore, peculiarly suitable for children. They are frequently used externally as lotions and collyria; but I question very much if they can be of more use when applied externally than pure spring water.

An important point in the use of all chalybeate waters must not be forgotten: they ought never to be prescribed when the system is in a loaded condition; they can do nothing but harm if given to any one whose liver or digestive system is in (to use a homely expression) a foul state. Sometimes patients are sent to drink the Kissingen or Dr. Muspratt's Chalybeate, with tongues, breaths, and complexions indicative of impurity; the consequence is, as sure as they drink, so certainly do they suffer from an increase of all their signs of ill health—just as they would suffer if they had been put upon the ordinary tonics and full diet at home. These waters are equally unsuitable in all cases where there is congestion or irritability of the mucous membrane of the alimentary canal. If given here, they occasion sickness, severe griping, and diarrhoea; a glazed tongue, or a raw tongue, will become more glazed and more raw the longer iron waters are drank. Weakness *alone* does not warrant the use (abuse) of tonic waters, any more than it permits underdone beefsteaks and XXX to be taken thrice a day.

GENERAL REMARKS ON THE USE OF MINERAL
WATERS.

Before giving a few cases illustrative of the way in which these several springs act, I must remark that when a patient is sent by a medical man, or comes of his own accord, to Harrogate, I consider that he is sent or comes for the special purpose of having its waters tried, in order, if possible, they may bring about that which ordinary treatment had failed in accomplishing. I therefore, whenever practicable, avoid the use of all medicines, and trust entirely to the natural means at my disposal. In doing so, I must not be supposed to despise drugs and to maintain that the waters, and nothing but the waters, are useful in the treatment of such and such forms of disease. I use them as a specialist, because it would be a piece of gross presumption on my part to suppose that I could succeed in treating cases by the usual means adopted by all well-educated and honest practitioners, when they had failed in hands equally or better skilled with their use than mine.

I am led to make these remarks because several medical men, who heard me read these observations in their original form, seemed to be dissatisfied because I did not give my patients physic; and because they had never used mineral waters, and knew nothing about them, they did not hesitate to pronounce them a myth;

one, more learned than the rest, suggesting that, as an *experimentum crucis*, I should have so many dozens of the ordinary water used for culinary purposes in the town where he lived, sent to Harrogate; and that I should treat so many of my patients with that water, and an equal number suffering in a similar fashion with Harrogate water; compare the results, and report. That was the most profound, the most astounding advice ever given to mortal. One can scarcely credit it, but it was offered in all seriousness, and by a teacher, a lecturer on materia medica.

In some few instances it may be necessary to prepare the patient by the exhibition of a smart aperient, without or in combination with mercury; but even these might be made fewer by having the dose administered before leaving home, and thus time would be saved.

CASE I.—Mr. G., æt 56, May 12th, 1860, came to Harrogate; has been in bad health and unfit for business for last six months; is now jaundiced; can neither eat nor sleep; bordering on delirium tremens; has drunk largely of brandy for many years, and is saturated with it now; tongue loaded; pulse quick, jerky; very full and tender over liver, which, on pressure, causes sickness, cough, and acute pain; organic mischief very evident. Brandy to be discontinued; to have calomel, gr. iij., confection of opium, gr. viij., at

bed-time; following morning to take two 12-ounce glasses of Old Well, warm.

13th.—Found he had vomited first glass, but retained the second; to drink 8 oz. of mild sulphur, at 12 and 4, and continue the Old Well each morning.

18th.—Much improved; can eat and sleep; is less jaundiced; water acts as an aperient and diuretic satisfactorily. To have a strong sulphur bath every other day, and continue the same waters.

June 3.—Leaves for London to-morrow; expresses himself as quite well and fit for business.

Remarks.—The congested and loaded condition of the drunkard's liver is very rapidly acted upon by the sulphur water. I have often been surprised to find it remain on the stomach when all else had been rejected, when the simplest effervescing drink came up as soon as swallowed. Two large goblets of warm sulphur will settle and do their work thoroughly well, and this sometimes without such a dose as I gave Mr. G. At the same time, of all cases, these are they which most frequently require a little preparatory dose. With this unloading of the liver, it is surprising to see the rapidity with which healthy signs show themselves. The hand loses its tremor; the tongue is no longer black as your hat, and rough as a file; the appetite returns, and with it the craving for drink goes. All this may take place even when the liver has become the seat of permanent organic disease. When there is such, of course the evil

day is but staved off for a time ; and so it happened in the case I have related. On October 1st, he returned, after a long bout of hard drinking, cent. per cent. worse than before, with dropsy ; and all the symptoms of sinking under the complication of a train of diseases beginning in brandy. Harrogate was no longer the place for him ; I therefore sent him home, where he died on the 17th.

CASE II.—May 16th, 1861. Mrs. M., æt. 37, recommended by her medical man to try Harrogate ; has suffered for many years from severe neuralgia, which attacks different parts of the body. At first the disease made its appearance whilst living in Australia, and subsequent to an attack of rheumatic fever. Also suffers from bilious attacks, with pain in left side, and severe headache for days together ; otherwise, general health in condition good. To drink the old sulphur as an aperient, and the mild thrice a day in alterative doses. To have a mild sulphur bath every second day.

June 4th, much better ; no return of neuralgia, although the weather has been cold and wet. To substitute the Kissingen for the Old Well, and the chloride of iron for the mild sulphur.

14th.—Has continued as above since the 4th ; looks much better ; has gained flesh ; states that for the last two or three days has felt giddy after taking the tonic

water. To discontinue it, and take the Kissingen in small doses instead.

23rd.—Has gone on progressing; feels stronger, and has no neuralgic symptoms. Considers herself so well, will return home to-morrow.

The following spring I learned that Mrs. M. had passed a much better winter than she had ever done since she became first affected with neuralgia, and that she never had a bad attack since her visit to Harrogate.

I have in many instances observed great good follow the use of the mild sulphur water of the Montpelier Gardens in chronic neuralgia, where the pain is of a dull aching character, and localized. When the pain is more acute and erratic, the Dr. Muspratt Chalybeate proves more valuable than the sulphur. I have never heard any particulars further regarding this case.

CASE III.—Mr. C., æt. 37—gout strong in both parents—has been for years subject to frequent attacks of sickness, always preceded by giddiness and swimming in the head, which leave him for days in a state of utter prostration. Vomits large quantities of colourless bitter water when attacks are on him. Pulse good; tongue clean; bowels regular; motions frequently contain undigested food. Complains of a sense of weight at top, and tightness at back of head; memory greatly impaired; often gets excited, and can settle to nothing; then sleep is impossible. Feels generally weak, good for

nothing, and cannot depend upon himself; has been under a variety of doctors, and been at diverse times treated for liver complaint and gouty dyspepsia; has taken mercurials, alkalies, taraxacum, nitro-muriatic acid, lemon juice, &c.; dieted on mutton chops thrice a day, with weak brandy and water for drink; feels no better for past treatment. On examining his urine, specific gravity 1030, numerous crystals of oxalate of lime. To take aperient doses of the old sulphur before breakfast, and 8 oz. of the mild an hour before luncheon and dinner. He continued this for a fortnight. He then substituted the Kissingen for the old sulphur, and the Dr. Muspratt chalybeate for the mild sulphur. These he took for a fortnight. During his stay he had a sulphur bath thrice a week, with a cold shower after it. At the end of the month he left for home, feeling well. The following year he returned, and reported that he had enjoyed better health than he had done since boyhood, keeping, with care as regards diet, free from all signs of his former ailments.

Since writing the above, I have had several visits from Mr. C., and his health is in all respects much improved; he is quite equal to his work, and never suffers from those frightful attacks of sickness which made his life miserable.

CASE IV.—Mr. P., æt. 62, came to Harrogate in April, 1861; had been confined for six months previous

to his bed or sofa, from gout in both feet; during this time was under medical treatment. General health good; has always been a temperate liver; tongue coated; circulation feeble; pulse weak; appetite impaired; sleeps little: to take the old sulphur water, warm, in aperient doses, before breakfast, and the same in alterative doses at 12 and 4 p.m. The water was drunk at his lodgings, as he could not bear the least motion. At the end of eight days, so much better he could bear a slipper, and had his first bath of strong sulphur water. In three weeks he could walk a little, and the Kissingen water was prescribed instead of the sulphur. He continued to improve rapidly and steadily, and left at the end of May, well. He remained free from gout during the rest of 1861, and all 1862. In March, 1863, he felt he was in for an attack, and at once determined to visit Harrogate. I found him much in the same state as in 1861, and put him on the same treatment, and with similar results, as on April 15th he left Harrogate in good condition. In April, 1864, he returned, and had a three-weeks' course of the waters, as a preventive measure; and he had no gout that year, nor during 1865. In the beginning of 1866, he was again laid on his back with it, and under treatment for a month before he could bear to travel, when he again repaired to Harrogate, and with the same benefit as formerly. So convinced is this patient of the good he receives from Harrogate treatment that, although he

comes from the North of Scotland, and hates travelling, he has determined to visit Harrogate annually. Mr. P. was again under my care last spring, 1868, and he told me he never had a return of gout since he left Harrogate, and that his general health had been most satisfactory.

CASE V.—Mr. W., æt. 50, has suffered more or less from jaundice since 1863; was very bad with it in 1864; and in summer, 1865, was ordered by his physician to go to Carlsbad. Whilst there, had repeated attacks of spasms of gall-duct, and increased discoloration. However, after a six weeks' course of the waters, he found relief, and passed a tolerable winter and spring in 1866. Next summer intended to return to Carlsbad, but the war and domestic bereavement prevented him doing so. In September he had a fearful attack of spasm, and became more jaundiced than ever. In October he came to Harrogate. He was then thoroughly jaundiced, emaciated, depressed; had constant nausea, no appetite, and could get no sleep from general prurigo. There was enlargement of left lobe of liver, which, he informed me, was a sequence of rheumatic fever in 1859. To take the old sulphur, two half-pints warm before breakfast, and 6 oz. cold at 12, 5, and 8; to have a strong sulphur bath for five minutes daily. In four days the change was extraordinary—sickness gone, appetite healthy, sleep undisturbed, itching greatly diminished, and the nervous depression removed. In three weeks, after pursuing the

above plan of treatment, he returned to town, better in health and clearer in complexion than he had been for three years. I have heard from him twice since; he gives a good report of himself, and assures me that Harrogate has done more for him than all previous treatment, including his six weeks' stay at Carlsbad. Mr. W. died at Carlsbad last summer, from organic disease of the liver.

CASE VI.—Miss L., æt. 17, has suffered from psoriasis vulgaris over the greater part of the trunk and extremities for the last twelve years. Face and hands free. Disease cannot be traced to hereditary predisposition. Has never shown a tendency to get better and worse at certain seasons; otherwise, perfectly healthy and strong. There are the usual thick encrustations of scales on elbows and knees, with numerous patches of psoriasis on body and outside of arms, thighs, and legs. All kinds of treatment had been patiently tried; each proved of no avail, even a long course of arsenic. For the last year the disease has been left to itself, and it seems to have remained stationary. To take the old sulphur, two 10-ounce glasses before breakfast; to have a mild sulphur bath for 40 minutes twice a week; and every morning and evening to sponge the body with mild sulphur water. This treatment was persevered in for three months, at the end of which time the disease had disappeared from all parts, except a very small spot on

each elbow, and one on the left knee. Miss L. returned in May, 1868, and remained for three months. The spots on the elbows and knees still existed, the rest of the body remained free. She left in July without being much affected for good as regards the little local patches.

CASE VII.—Mrs. D., æt. 55, has suffered from eczema for the last eighteen months. On discovering the eruption, she at once repaired to London, and placed herself under the care of a physician, who, failing to command relief, called to her aid a specialist. The most of the trunk, under the armpits, bend of the arms and knees, were the seats of the eruption; but the principal, and by far the most painfully affected parts, were the mucous passages. The irritation in these were so constant and so fearful, that life was miserable. During the eighteen months she continued under medical treatment, she had taken alkalies, acids, iodine, quinine, iron, arsenic, colchicum, mercury to profuse salivation, and had applied outwardly as great a variety of medicaments as she had taken inwardly, not only without improvement, but the reverse; she steadily got worse. In this plight she returned home, and consulted her family doctor, who at once ordered her to Harrogate. When I heard her story, and saw her condition, I wished she had never been sent my way. The whole of the lower part of the body looked like raw flesh, and except the face and hands, eczema appeared everywhere. More-

over, she told me that water externally she could not bear, and that every kind of bath drove her distracted. General health tolerable, and her appearance and condition were far better than could have been expected after such antecedents. I prescribed half a pint of the Old Well, with same quantity of the magnesia water, to be taken before breakfast, and 8 ounces of the magnesia water at 12 and 5. For a fortnight there was little or no improvement, and I wrote to her medical man to that effect. In his answer, he said: "Of course what you write is not encouraging, yet I do not overlook the fact, that no sufficient opportunity to judge of the effects of the waters has been had; and I do earnestly trust that the very slight improvement alluded to, may be the commencement of a more decided change; for in fact, *her agonies have been almost beyond endurance.*" And such proved to be the case. At the end of the third week the irritation had so far abated, that my patient could sleep for seven hours without being disturbed—a thing she had not done since her troubles began; in fact, she was afraid to go to bed, and spent nights in her chair. In another three weeks the disease had entirely disappeared; and with a grateful heart this patient bade adieu to the stinking wells. This lady returned again the following year, and the cure remained all but perfect. She had experienced no bad attack since she left Harrogate; although there was at distant intervals slight roughness and itching where the eczema had been worst, it was

bearable and soon disappeared. She came for a short course of the sulphur waters, in order to testify her gratitude to the place, and also believing that this step might act as a preventive measure.

CASE VIII.—Mrs. R., æt. 52, has suffered from eczema impetiginodes over the trunk and extremities for six months, and is now in a most helpless condition. Her hands are covered with blisters filled with pus; and her body is so sore, she cannot bear anything in the shape of clothes, but a thin, light shawl. Has been treated during the time of her illness, and taken lots of medicine, among the rest arsenic. Tongue loaded; pulse 90, full and irritable. There is great emaciation, and the skin feels burning hot and pricking; not so much itching. To take a quart bottle of Old Well, warm, before breakfast, and two half-pints of mild sulphur during the day; a mild sulphur bath every other day; the day she has no bath, to bathe with the mild sulphur morning and evening. A month's treatment restored health in this case, and she left nearly cured. This case was sent me by the same gentleman who sent me Mrs. D. The other day I wrote him, and asked him the results. He wrote me, in answer—"I have the satisfaction of being able to report of both, that the very marked improvement which took place last spring in Mrs. D.'s case, and last autumn in Mrs. R.'s, during their residence at Harrogate under your care, is abiding;

and they have now the unspeakable enjoyment, if I may say so, of living."

CASE IX.—L. B., æt. 24, has been for years in delicate health, and more or less under medical treatment on account of chlorosis. In June last, was sent by her medical man to Harrogate, in order to try the effects of the Dr. Muspratt chalybeate. When I first saw her, she presented most of the characteristic symptoms of anæmia; she was nearly bloodless; her digestive organs were greatly deranged; appetite capricious and depraved; the circulating and nervous systems were equally at fault; she could scarcely move from one room to another for want of breath and palpitation. Her mind was in as miserable a plight as her body; she was gloomy and depressed when awake; when asleep, she was tortured with fearful dreams, and awoke in a terrible fright, generally bathed in perspiration. Latterly her stomach had revolted against everything in the shape of medicine, the very thought of which brought on retching, which nothing but ice could allay. After two day's rest, her diet being strictly confined to strong beef-tea with port wine, and corn flour with brandy, I ordered her to take two 8-ounce glasses of the Kissingen water, warm, an hour before breakfast, with twenty minutes between each: this acted as a mild but effectual aperient. Half an hour after meals, thrice a day, she drank very slowly 3 oz. of Dr. Muspratt's chalybeate. Both waters

agreed with her from the first. For the first fortnight she was wheeled in a Bath chair to the wells; after that, she was able to walk once a day to them, a distance of 300 yards; at the end of a month she was much better; discontinued the Kissingen water, and substituted 6 oz. of the Dr. Muspratt chalybeate for it before breakfast. She continued this treatment till the end of August, improving steadily day by day; and in the beginning of September she returned home sufficiently restored in health as to be able to assume, with comfort to herself, the duties of a moderately active life. L. B. has had a second and a third course of the Dr. Muspratt chalybeate, and is now (April, 1869) in good health, and no longer anæmic.

CASE X.—Mr. J. S. G., æt. 32, has suffered for years from one of the worst forms of nervous dyspepsia. In describing his symptoms I shall use his own language:—“From my fourteenth year till my thirtieth I have been actively engaged in a large and daily increasing business, the entire responsibility of which latterly rested with me. During these years I seldom allowed myself more than ten minutes, and at the most, half an hour for dinner; this I bolted. I lived regularly and temperately. My first signs of illness were eructations and great distension of stomach after eating, so that I could not bear my clothes. With this I had constipation. Occasionally I became greatly excited; sleep I could not.

I became affected with the most fearful depression and nervous irritability. In other respects I felt well enough, except that my memory was not to be depended on; and I could not think without an effort, for even a very short time. I had the best medical advice in my own town and London; tried many remedies—changes of scene and air, travel; then, finding myself no better, I had recourse to homœopathy. That did me no good; so I tried hydropathy at Malvern for ten weeks. That did me harm. I lost strength. I therefore gave it up, and went to the sea-side. At this stage, on looking back, nothing could be more discouraging—sleepless nights, followed by extreme depression of spirits; I had noises in my head and ringing in my ears; I resented the smallest trifles, without regard to the consequences. All this time I was constantly in the habit of taking aperients. In August, 1864, I determined to visit Harrogate. You know the rest.”

On examining this case, I found no visible signs of disease; the body was spare, but well enough nourished; pulse good, tongue clean, secretions healthy; there was tenderness and flatulent distension of stomach and colon; and the countenance expressed anxiety and suffering. He had adopted a judicious system of diet, knowing that the slightest error would entail his former miseries.

I prescribed, first of all, the old sulphur water in aperient doses. After ten days, during which time there was little or no improvement, I gave the Kissingen

instead, and combined it with the Dr. Muspratt chalybeate. These he took between four and five weeks, with a tepid shower bath twice or thrice a week. At the end of that time he was very considerably improved; could sleep the whole night through, had regained his spirits, and could enjoy such food as he was allowed, his drink being for the most part weak brandy and water, or hock. He then left, not cured, but materially relieved. I have seen him twice since, having had him under my care for some weeks, and the improvement has been in a measure satisfactory; for he informs me that he (July, 1865) is no longer subject to the fits of nervousness and indigestion he used to have, unless through indiscretion he has been tempted to partake of something which was sure to disagree with him. I saw this gentleman last year, and he enjoys fair health, but suffers from the old depression and flatulence on over exertion.

It has been very generally supposed, even by medical men, that the waters and baths can only be successfully employed during the warmer months of the year, and that from the middle of October till the beginning of May patients ought not to visit Harrogate with a view to treatment. After careful study of a considerable number of cases, I have come to a very different conclusion; and in order to prove that certain diseases can be as properly treated in Harrogate during the winter months as during the summer, I shall now record the

results of a few, which were treated by me during the last two winters.

CASE XI.—Mr. S., æt. 47, consulted me in November, 1867, on account of rheumatic gout, affecting the knees, ankles, elbows, and wrists; has had frequent attacks of gout during the last twenty years, for which he took quantities of Blair's pills; latterly has been very much reduced in strength, partly from anxiety in business and bad digestion, but principally from recurring attacks of painful swellings in the neighbourhood of the large joints; for these has been treated with alkalies and hot baths; bowels very easily acted upon; skin given to perspiration; kidneys, as might be expected from the freeness of the former secretions, are not so active, and the secretion is loaded with lithates; no organic disease of any kind. To drink the old sulphur thrice a day, and to have a strong sulphur bath every night before going to bed; to live on plain, generous food, chiefly animal, and to drink nothing but gin and water; to give up smoking entirely, and to take as much exercise as possible. This treatment was pursued for five weeks, at the end of which time Mr. S. left, having recovered his health sufficiently to enable him to resume work. He wrote me in a month to say that he continued to improve and gain strength.

CASE XII—Mrs. T., æt. 52, consulted me in December, 1867, on account of an obstinate rose-colored rash

affecting the forehead, nose, cheeks, and chin. This had troubled her for the last eighteen months, and always became much worse after dinner, or when she went into public; the redness was always accompanied with a smarting or burning sensation. She had been treated for liver and dyspepsia, and for the last three months had been taking arsenic, without any change; never took any stimulants, and lived upon rather low diet; tongue white and furred, especially in the morning; bowels irregular; appetite bad; sleep deficient and troubled; has been in the habit of wearing two thick veils to keep the wind off the face. I ordered her to take an alterative pill at night with henbane, and the Kissingen water in the morning, Dr. Muspratt's spring twice daily; to live on a more generous diet, to take half-a-pint of light claret at dinner, and to bathe the face with the strong sulphur water morning and evening, and expose it to the air. This she thought would simply make her ten times worse, as she had been told to take the *sulphur waters* and *baths*, and continue her poor diet. She soon improved; remained here till middle of January, faced the coldest winds, and as she gained strength the face cooled down; first the forehead got well, then the cheeks and chin, and at last the nose lost its redness, and she went home well. In the following May she returned because the face had shown a disposition to take on its old ways, but at the end of a fortnight the redness *had disappeared under the use of the same waters and treatment.*

CASE XIII.—Mr. W., æt. 50, farmer, very tall, heavy man, was sent to Harrogate by his doctor's orders in December, 1867, on account of eczema affecting the entire cutaneous surface. During the acute stage had been very properly treated with cooling aperients, gruel fomentations, and emolient applications to the skin. Has been accustomed to live very freely, taking beer to breakfast, the best part of a bottle of sherry to dinner, and has not been very particular to the number of *gins* at night. The itching, when he gets warm in bed, is frightful; in all respects well except the skin; this is entirely covered with eczema in its dry or squamous stage; there are numerous bloody scratches over arms and legs inflicted during sleep. I put Mr. W. on a restricted allowance of wine, took off all beer and spirits, and ordered him to drink the sulphur water each morning, the magnesia during the day, and to have a magnesia water bath daily. At the end of ten days this giant was so pulled down by the waters and baths, and want of his liquor (?), he could scarcely walk from Low to High Harrogate. Eruption much better; has good nights, but perspires very much; itching nearly gone. To discontinue the sulphur waters and take the Kissingen baths every other day. This treatment he continued for three weeks, and left Harrogate cured. He returned in September, never having suffered from his old enemy.

CASE XIV.—Mr. R., æt. 33, came to Harrogate in January, 1868; has no special illness, but for the last year

has been in bad health. Chief symptoms—loss of strength and flesh ; no appetite ; great depression of spirits, almost suicidal ; mind unhinged ; can settle neither to read nor write ; takes an interest in nothing ; pulse quick and feeble ; tongue slightly furred ; complexion pale, waxy ; has a haggard, anxious look ; has pain and sense of fulness over the pit of stomach ; sleeps badly. I find Mr. R. has lost a considerable sum by the depreciation of railway property, and that with dull times his business has fallen off very materially. These facts have preyed upon him, and occasioned loss of health ; there are no signs of organic disease. I advised him to live in public ; ordered him a smart aperient, after the action of which he commenced Dr. Muspratt's chalybeate. This he took thrice a day, going each time to the spring for it ; tepid shower bath every other day ; to eat and drink whatever he fancied ; and to have horse exercise and be as much out in the open air as possible. All these conditions he observed for a month, and at the end of that time he was as well as ever he was.

CASE XV.—Mr. K., æt. 56, clergyman, came to me in February, 1868. He was suffering from difficulty of breathing, with cough and expectoration ; could not walk up the least ascent, or go up-stairs for want of breath ; and in the middle of the night had to sit up in bed and gasp for breath ; has long suffered from dyspepsia, with liver complaint ; and had been under medical treatment

for years, more or less. Nothing seemed to do him permanent good, and he had been recommended to try Harrogate. Pulse quick and feeble; face congested; tongue loaded; general chronic bronchitis in both lungs; heart's action very weak, but normal. I thought this a very fair case to test the effects of Harrogate during a cold, trying month, where there was chest affection as well as general derangement of the whole digestive system. He took full doses of the Old Well, warm, each morning before breakfast; these acted freely. During the day he took small doses of the same. Shortly all his symptoms began to abate; his breathing became freer; expectoration easier; he was able to walk out daily, and at the end of six weeks he considered himself as well as he could ever hope to be.

I have frequently observed the good effect of the Old Sulphur water in promoting the solution or thinning of tough phlegm in cases of chronic bronchorrhœa. The air of Harrogate also acts as a tonic to the relaxed and congested mucuous membrane, thereby lessening the secretion from its surface, much in the same way as the air of Cannes does. Many of my patients have drawn my attention to the similarity of the two places as regards climatic conditions, and the corresponding results attending them.

CASE XVI.—Mr. H., æt. 67, has suffered for above three years from eczema rubrum of right leg from knee to the

ankle, with patches on the back, chest, and behind the ears ; the itching has been intolerable, and the pain from swelling in the leg has incapacitated him from exercise ; has been under medical treatment all the time, and for many months has been under the advice of Mr. Startin, of London, without improvement. Mr. H. is very corpulent, complains of pain and stiffness in back of neck, (rheumatic) which has caused him to fear apoplexy, especially if his leg dried up ; this idea had been entertained by more than one of his attendants. His heart and pulse however give no signs of disease in the one or degeneration of coats in the other, and I told him to forget that there was such a possibility as apoplexy. He is of a strong, gouty habit ; had lived very generously for many years, although now is temperate in all he eats and drinks. Mr. H. came under my care in December, 1868. I at once put him on the sulphur waters in aperient and alterative doses ; these he took in his room, as he was unable to go to the wells. The Hospital mild sulphur was used as a lotion morning and evening, and he had a bath every other day. The itching soon diminished and all the spots improved, especially the leg, which at the end of six weeks was so sound as to allow Mr. H. to go home. He left on a bitter cold morning, travelled for some eight hours by rail, and during all this time the bad leg felt chilled to the bone, and could not be made warm. On reaching home he had a rigor ; his medical man saw him next morning

and found the leg as bad as ever, red, shining, and burning; for three days he got worse, the pain was so great as to prevent sleeping. In this state he was sent back to me, and it required a second course of six weeks to restore the leg to the condition it was in at the end of his first visit. In the treatment of this case I had to apply cooling and stimulating lotions and liniments to the leg, as the mere use of the water was not sufficient to counteract the severity of the local symptoms. But it must be borne in mind that every kind of internal and external treatment under the ablest men had been tried for above three years without benefit, and due credit must be given to the alterative action of the sulphur water in bringing the system of the patient into such a condition as to favor the curative power of local means, which before its use had been fairly tried and found of no avail.

CASE XVII.—Miss C., æt. 50, sent to Harrogate, beginning of last March, on account of succession of carbuncles and boils, which have been her constant tormentors for more than two years, has at this time many boils on the body and two small carbuncles on upper and outer right thigh. Before the appearance of a carbuncle, is prostrated with sickness; is much emaciated, and greatly depressed in spirits. Kissingen water prescribed in aperient doses before breakfast, and Dr. Muspratt's chalybeate during the day; in a fortnight, treatment had to be discontinued

on account of an attack of influenza, which was followed by fresh furuncular mischief ; these left Miss C. in a very feeble state. In the beginning of April she commenced Dr. Muspratt's chalybeate alone, taking it in full doses before breakfast, at midday and afternoon. This was continued for one month with the best possible results, both as regards the general health and local symptoms. Here I may state that the above water gave tone to the bowels, which acted regularly under its influence, a condition altogether exceptional, as she had for years been compelled to take purgatives. This is no uncommon, yet a most important and beneficial action of this spring ; and I must also add that I have given it in a large number of cases similar to the one I have now related, with the invariable result of removing the predisposition to that most unsatisfactory condition of body, which has for its object the raising of a perpetual crop of boils or small carbuncles.

I might easily relate the history of many interesting cases, but these I think sufficient for my purpose. I admit they are exceptional cases, as I have selected them in order to show what Harrogate waters, unaided, in most instances, can accomplish in the way of cure. Some there are who will tell you that sulphur, magnesia, cream of tartar, or any cooling medicine, would have done as well, forgetting that these simples, backed by the most heroic remedies, had been tried, and persevered in for months, with questionable results. Others will

attribute the good to the pure air, pleasant society, and absence of business cares ; but the cases I have detailed could not be influenced by these conditions, as they all came from districts remarkable for their purity of atmosphere. They were without society, being for the most part immured in lodgings, lacking many of the comforts of home ; and they were constantly worrying themselves on account of being separated from their friends, and because they found Harrogate so dull. In speaking thus favourably of Harrogate as a health resort, do not for a moment suppose that I have the slightest wish to disparage other watering places, or, above all, general therapeutics. Such is very far from my thoughts, as I have not only the greatest respect for legitimate medicine, but an honest faith in its applicability, as being not only *a means*, but *the best means*, for effecting the cure or relief of most diseases.

CHAPTER VIII.

ON ECZEMA AND PSORIASIS.

IN reference to eczema and psoriasis, I may remark that I hold the two diseases to be perfectly distinct. As regards their proximate cause, I question if anything like a true explanation has been offered, even by the most skilful dermatologists. Hebra's theory as to the cause of eczema—namely, that it depends upon an altered condition of the blood, having its origin in derangement of the sympathetic system of nerves—is more in accordance with the facts I have witnessed in numerous instances of this disease than any other; but this leaves us still in ignorance as to the nature of the change in the nerves, or the cause of that change. For my own part, I look upon eczema (especially among the young) as an outward expression of the strumous diathesis, and that it is always a sign of constitutional debility or loss of tone. Moreover, I differ with Erasmus Wilson when he states that eczema, in its chronic, dry state, is to be looked upon as psoriasis.*

* *Vide* "Diseases of the Skin," page 181.

If Wilson is right, it logically follows that psoriasis (or alphos as he now terms it) must have been preceded by an acute attack of eczema, with its constitutional fever, its local heat, swelling, itching and exuding. Now the history of true psora is one *per se*—a small, tiny spot, *dry*, slightly raised in centre, is discovered on almost any part of the body, arms, or legs; there is no disturbance of the general health, no sign of local irritation. The *spot* is visible, that is all. You remove the top, it gives no pain. The removed crust consists of enlarged, thickened epidermic scales, perfectly dry, and the spot exposed by their removal is also dry, of a dull red colour, and exhibiting a few raised papillæ; in twenty-four hours it is again covered by scales, but these are not so white as they afterwards become; they are tinged with yellow. This one spot may be the only spot visible for years, especially in a young patient; by-and-bye more spots appear, especially over the elbows, knees, outside of thighs, legs, and arms; many of these join together, forming irregular patches of eruption, covered by thin white scales, which are readily removed by rubbing. In general these patches give no trouble, and seldom affect the face or hands, although they appear on hairy scalp, whiskers, and eyebrows. I would ask where are the symptoms of eczema in the picture I have just drawn, and being destitute of them from first to last, how can this condition of skin be spoken of as chronic eczema? Moreover,

the skin in chronic eczema presents totally different appearances ; the scales here are generally numerous and small ; the part affected extends from top to bottom, and round a whole limb or trunk ; the itching is intolerable, and every now and again, at some part or another, you have the true sign of the disease—moist surface, frequently passing into active exudation, accompanying which you have infiltration of the cellular tissue ; in fact, a return to its active or acute stage. *No such symptoms have ever been observed by me in true psoriasis*, which I hold to be a distinct form of cutaneous disease, and no more connected with eczema than it is with small-pox.

Eczema squamosum is not only different in its nature, but also in its curability, from psoriasis, or lepra vulgaris. The one disease, eczema, is peculiar to a weakly constitution ; the other, psora, almost invariably is found to exist with a healthy, often robust, constitution ; and few families showing it in their blood exhibit any symptoms of struma. Moreover, if in such families, from one reason or another, there are weakly members, these, as a rule, are exempt from the eruption, whilst the stronger have it. Dr. M'Call Anderson* says, "There can be no doubt that psoriasis usually occurs in persons of a sound constitution ; and that those affected with it are very rarely scrofulous is quite certain." In a following paragraph he adds : "But while the constitution of the patients is generally sound, a careful study

* *Vide* "On Psoriasis and Lepra," page 12.

of the cases under my care has led me to the conclusion—one which I am aware is at variance with the generally received opinion—that they are not infrequently debilitated. At the same time, it must be observed that *mere debility is quite incapable of itself of calling forth the disease, unless the predisposition to it exists.*” Now, I take a totally different view of the facts here narrated by my friend Dr. Anderson ; and my experience has led me to attribute the debility “*not infrequently*” found in patients who have long suffered from psora to the effects of long courses of most potent drugs which have been administered for the purpose of cure. I have met with many cases of this disease—old chronic cases—which have never been treated for it ; and I have never seen one such (as far as I remember) showing signs of debility. I have met with many more who had gone through courses of arsenic, mercury, iodide of potassium, &c., &c. ; and among these I have found debility very often. I therefore hold that debility is not so much a cause of the disease, as a sequent to its treatment. Still, let me add, that the evils arising from injudicious physicing are almost invariably to be laid at the patient’s door, not the doctor’s. Any one who knows the anxiety displayed by the leprous to get rid of his burden, also knows the greediness with which he takes anything which has been prescribed to assist him in throwing it off. I have known patients take twice and thrice the quantity of medicine prescribed, for weeks together,

and being disappointed, without any check, go from one drug to another. Surely such conduct cannot but lead to undermining the vital powers, and debilitating to such an extent as to render the individual liable to disease of a much more serious character than the one which had proved so obstinate, and which is in reality so harmless, although obstinate. Again, I must differ with high authority. Mr. Wilson states* “The cause of lepra is a special poison, the nature of which is obscure. I have stated my belief, and I see no reason to change that opinion, that the leprous poison is in its essence and origin *syphilitic*.” My reasons for holding a different view are the following:—

1st. Were it owing to the specific poison here stated, it would be much less difficult of cure.

2nd. It would be accompanied (as all diseased states depending upon such a cause are) by a cachectic or bad habit of body.

3rd. Because diseases having such an origin, by transmission and descent, “through several generations,” have the tendency to wear out; and lastly, because psoriasis is intensified by transmission from parent to child. What was a slight roughness or scaliness behind the ear of the father becomes true psoriasis in the son; and where one member of the first generation is affected, you have two of the second and three in the third, and not only do the cases become more common but more marked.

* *Op. cit.* page 306.

I hold lepra to be a strictly blood disease, but cannot offer any explanation of its origin or nature. I know no disease more difficult of cure; yet a great deal can be done to lessen the evil, and even banish it for a time. It is strictly hereditary, and when known to exist in the members of any family, should any of these determine to marry, let me give a word of counsel: Do not intermarry with your own blood; and if possible, choose a partner of a totally different temperament and constitution to your own. Under all circumstances avoid alcohol in the shape of brandy, whiskey, rum, and gin. Wine and beer you may drink, but be moderate. Live plainly and well, and attend to the daily washing and grooming of the whole body. One more remark on this disease: I have met with many cases, which after having had it for longer or shorter periods, have been attacked with various acute diseases, diseases one might naturally have expected to have eradicated the chronic—such as scarlet fever, small-pox, typhoid and typhus fevers. The effect of these on the patches was to render them for the time being less marked; sometimes they entirely disappeared, but in all they returned whenever convalescence was established, and in not a few were worse than before. Eczema, like psoriasis, most frequently depends upon a vitiated state of the blood, or constitutional cause; but I have met with many cases that appeared to me to depend upon some change in the nerves of the part affected, otherwise I could not account

for the intensity of the local symptoms and their *periodicity*, with the total absence of all constitutional disturbance. When such is the case, local remedies will prove sufficient for the cure of the disease; but in cases such as I have above narrated, where there is a diathesis to contend with, no local treatment will prove sufficient; it may alleviate, but it requires a steady perseverance in a course of appropriate internal remedies to act upon this habit of body, and so alter it as to render the local disease no longer a necessity. I am fully alive to the fact that eczema is frequently dependent on local causes, peculiar to different occupations, &c. In these cases, cessation from the source of irritation, with attention to soap and water, will generally be enough to effect a cure. I am equally satisfied with the propriety of curing eczema whenever we can, except in some cases of eczema capitis in children during teething. Some believe that to cure the eruption where it is extensive, would be to kill the patient. I have never seen anything but good follow the drying up, even of the most extensive eruptions, where the drain upon the system by reason of the discharge alone, to say nothing of the pain and other attendant evils, has been both continued and copious. The idea of the discharge being a vent or safety valve in the great proportion of cases, is no longer held by men who have had most experience in the management of skin diseases; that a burst of *weeping* (eczema*) will sometimes relieve the

* Eczema, derived from ἐκζέω, to boil out.

system, is a fact which I have often witnessed ; but I am not talking of this form of discharge, but of the old chronic form, where the discharge has been going on for months or even years. These are the cases where *à priori* one would expect danger from its sudden stoppage, and these are the very cases in which I have seen no bad consequences follow even the sudden cessation of the exudation.

I have dwelt thus long on psoriasis and eczema, because they occupy the most important rank among diseases of the skin, both from their nature and frequency.

I find that out of 1,120 patients during the last year treated at the dispensary for skin diseases in Glasgow, there were 244 cases of eczema and 72 of psoriasis.

In offering these observations, I do not mean that they should be looked upon as giving anything approaching to an outline of these affections, either as regards their history or treatment ; they in reality are but a few facts I have taken notice of, in common with other observers, and I have given them here simply because I consider them by no means inappropriate as a sequel to the cases I have above recorded ; and moreover, because they are of sufficient importance in themselves to warrant an introduction into any treatise upon a class of remedies, which have been long celebrated for their curative powers in the treatment of these diseases.

Since writing these remarks upon the most prevalent forms of cutaneous disorders, I have asked myself the

question, How it happens that Harrogate treatment should be found so very efficacious in alleviating and curing the worst and most persistent cases of chronic eczema and psora? Cases that have been under the most skilful physicians for months and years—without receiving that benefit for which they might reasonably have looked—here in the course of six weeks to three months, experience the most marked benefit, and frequently (especially the eczematous) leave cured of their disease. The answer to the question is simple and satisfactory; a large proportion of such cases are complicated with the gouty diathesis, and hence it is that ordinary therapeutics fail in their usual effects, and hence also it is, that Harrogate mineral waters prove so successful. The intimate connection between gout and these eruptive affections I have long noted, and I find that of the thoroughly chronic cases occurring after middle life which have come under my care, about forty per cent. exhibited the most characteristic symptoms of gout, or belonged to families who had been martyrs to it for more than one generation. Sometimes the patients had for years been subject to recurrent attacks of the old-fashioned podagra; then it would cease to visit the feet, and instead, symptoms of a dyspeptic kind would shew themselves, or the chest would become bothered, the breathing short and laboured, with cough, accompanied with much phlegm, especially in the morning; the heart would often be affected with nervous palpitation.

With all these there would be mental lassitude and depression, and frequently it would be observed that each and all of these ugly indications of ill-health, would suddenly take their departure, and in their place the skin become the seat of wet or dry tetter; or the reverse would take place; the skin, being the seat of mischief, would suddenly become well, and immediately the stomach, lungs, heart, or head, begin to take on bad ways.* Such is the history of a very large class of patients, who are daily sent to Harrogate in order to see if its waters may rid them of their tiresome ailments, and I am happy that I can add, that very few of them have to go away disappointed. The cause of the skin disease in these cases is not in the skin, but in the imperfect way in which the processes of digestion and assimilation are carried on, and I know no treatment so effectual in correcting and removing such faulty conditions of these all-important functions, as a thorough, judicious course of mineral waters.

* Dr. E. Headlam Greenhow, of London, in his recent able work on bronchitis, makes the very same observations regarding the influence of the gouty diathesis on the alternations I have here alluded to.

CHAPTER IX.

CONCLUDING REMARKS ON TIME OF YEAR AND KIND
OF CASES FOR HARROGATE TREATMENT.

I SHALL now conclude these observations with a few words on the time of year, and kind of cases, most suitable for treatment by Harrogate waters. The best time is certainly from May till end of September ; but there is every reason for asserting that Harrogate may be resorted to by the great majority of cases most certain to receive good from its sulphur springs at all times and seasons. During the severe winter of 1860, and during last winter, I have had patients drinking and bathing with quite as good results as I ever witnessed in the mildest weather. Of course, I do not recommend delicate subjects to come in cold and inclement weather ; but dyspeptic, gouty, bilious people are not of necessity fragile, nor are many suffering from those cutaneous affections Harrogate is most likely to remove.

The class of patients capable of receiving benefit by a visit to Harrogate is very large, comprising most

states of unhealth depending upon, or accompanied by, faulty digestion and assimilation, or where the system has become loaded with impurities by reason of the imperfect removal of effete matter through the insufficiency of its emunctories. Most of the cases are eminently chronic, and have either resisted a fair trial of the usual remedies, or have shown a decided intolerance of them. They may be purely functional, organic, or a mixture of both. I do not mean to say organic lesions can be cured by any mineral water, but that many symptoms caused by or arising independently of structural changes may be so alleviated by the physiological action, especially of the sulphur waters, as to render the patient abler to bear the heavy burden of disease imposed upon him.

This was well shown in a case of cancer of the colon, which came under my notice last season. The gentleman was sent to Harrogate on account of supposed liver complaint. He was yellow enough, and his motions showed a want of bile, but the liver was merely sluggish. He had constant diarrhoea, much colic, urine scanty, and passed with great difficulty. Most medicines disagreed with him, and caused as painful symptoms as they were intended to relieve. I put him on the mild sulphur water, 10 oz. before breakfast, and 5 twice a day. In three weeks he improved very much as regards his secretions. He began to gain flesh, and by-and-bye he looked and felt so much better that he and his family told me they

thought the water was going to make a new man of him. Before they left Harrogate I warned them of the nature of the case, and I have since learned that he died from malignant disease of the colon and rectum. Still, whilst drinking the water he was free from his most distressing symptoms; and his life, if not prolonged, was thereby rendered—I cannot say enjoyable, but tolerable—which it had not been for months previous.

There is yet another class of patients, and that a rapidly increasing one, concerning whom I would add a few words, namely, those suffering from failure of nerve force, consequent upon overwork. These derive great and often lasting benefit by three or four weeks' residence at Harrogate. Every year I have watched examples of broken-down men—men who had been for years noted for their mental and bodily smartness—the promoters and pillars of large and costly schemes—the shoulders upon which rested the fame and responsibility of old-established firms—come with all the unmistakable tokens of jaded brains and used-up bodies, and leave, after a while, with minds invigorated and frames refreshed, again capable of taking their places in the front rank among their compeers. Here I attribute the good got to that unusual and most enjoyable kind of life one is almost forced to lead during a sojourn at Harrogate. In the morning, at the wells, you breathe a purely medical atmosphere; during the day, at some avourite haunt, you live in a strictly physical one; and,

in the evening, you luxuriate amid the refinements of social life; thus your thoughts are not only taken completely off yourself, but turned into a channel new and strange to them; the load of care is lifted from your back, you begin to feel interested in people and things different from and unconnected with yourself; you are amused—happier than you have been for long; and, if the change has not come too late, health will very generally wait on happiness.

CHAPTER X.

ON JADED BRAINS.

THE greater portion of the following observations was read by me before the members of the Northumberland and Durham Medical Society. The few printed copies I received were soon exhausted. Since then, I have often been asked to enlarge upon the subject, and publish. Instead of doing so, I thought I might, with all appropriateness, bring in what I had to say, as I am now doing, especially as the symptoms I have to describe, are those which I have found very common among men sent to Harrogate as invalids. I here may mention, that I am not aware that I ever witnessed the same peculiar class of symptoms in a woman. I name this fact without wishing it to be understood that I mean women are exempt from this form of nerve exhaustion, but that it must rarely happen to them.

Much has been said and written by medical men during the last decade, regarding what has been called *the changes of type* exhibited by certain diseases, since so recent a date as 1835. Here, as well as elsewhere, we

have had our fashions ; and as the high-heeled shoes and tight sack-skirts of our grandmothers gave place to the heelless slippers and too ample robes of our crinoline-loving sisters, so the old-fashioned, high, raging fevers and strong local inflammations, with their hot skins, parched tongues, and hard bounding pulses, have given place to low fevers, with feeble pulse and cold clammy skin, and to functional disorders of a bloodless or anæmic origin, whose every symptom is indicative of lowered vitality and impending exhaustion.

This change of type is not confined to one class of ailments, but seems by its mysterious influence to have leavened the whole category of ills which affect mankind, and has thereby effected a corresponding change in the principles, as well as the mode of treatment of every aberration from health. Heroic remedies now, are as seldom thought of as they were frequently employed in bygone times. Depletion (a very great card even in my student days) has been trumped by stimulation ; counter irritation has in a measure given way to sedatives ; calomel and opium to quinine and iron ; starvation (commonly called low diet) to judicious feeding ; and dietetics, with proper hygienic measures, have in numberless cases rendered the scales and measures of the once too active apothecary as obsolete as his lancets.

The question naturally arises, What has brought about this wonderful alteration in diseased action, and no less astounding revolution in the tactics of the physician in his treatment of it ?

Some careful medical observers will tell you, that since the outbreak of epidemic or Asiatic cholera in 1831-2, they have never witnessed either in their own practice or others, anything like the old inflammatory fevers, and acute local inflammations of former years. Others believe that the type of diseases has changed because there has been some remarkable change in the atmosphere or climate; whilst not a few will attribute it to the altered condition under which the many thousands of our operatives exist in large, and frequently ill-lighted and worse ventilated mills and workrooms. Whatever the cause, I am of opinion that *our measure of civilization* has, to a very considerable extent, proved the *means* whereby diseases in general have changed their type or physical characters. Not only so, but that this civilization, this "march of intellect" besides assisting in modifying old and familiar diseases, has given birth to a very large class of disorders, depending upon an abnormal and exhausted condition of the nervous system, rather than the presence of any morbid agency. For the most part these nervous affections are entirely functional, at least, they are so at the outset; many of them have already been most graphically described by able writers. There is one, however, which, as far as I know, has never received that attention its importance entitles it to; and believing, as I do, that it is becoming *the disease of the age*, I shall offer no apology for attempting to delineate the causes, symptoms, and measures

to be adopted for the relief of that unsatisfactory condition, to which, for the want of a better, I have given the name of Jaded Brains.

Used up, undone, jaded, are no uncommon expressions ; nor are they alone descriptive of the old and infirm, of the votaries of pleasure, the victims of dissipation—or even of those whose bodily powers have been enfeebled by disease, or undermined by want and privation. They are more frequently made use of to express a state of mental or nervous exhaustion than bodily, and have a totally different signification to the terms tired, fatigued, weak, which are applied to a condition of body consequent on unusual exertion. Is there a medical practitioner of the present day, of even moderate experience, who cannot testify to the fact that these, or similar expressions, are being constantly made use of by many patients in the prime of life, and apparently in good health ; at least, whose outsides bear no visible sign of decay within ? How many among the active, bustling, money-hunting men of the world—because they are going too fast, working at high pressure ; because their business is no longer the plain, matter-of-fact concern it used to be, but is accompanied with a vast amount of excitement, and demands an expenditure of nervous energy which they cannot afford—complain of being used up. How many tell us that they are fit for nothing, that their minds have become unhinged, or have lost, in a certain measure, the power of con-

tinued thought; that the writing of the simplest business letter, which ought to cost them no trouble, is a task which can be accomplished but with the greatest difficulty; that they have ceased to take an interest in everything—wife and children are indifferent to them; everything alike and everybody is a bore; with spirits broken and fast-failing strength, they apply first to one thing, then to another—wine, brandy, tonics, each have their turn; by these the jaded brain is urged to make another effort in the race for wealth, position, or power, just as the pumped-out racer is urged with whip and spur to keep the lead, and too often, with like result—a breakdown.

What, let me ask, does this break down imply? A short sharp illness, like typhus, scarlet fever, or small-pox, once passed, the patient for ever freed from such pestilential diseases, returns to the active duties of life as fit as ever to enter into its enjoyments and share its responsibilities. Alas! no; it means, in the great majority of cases, permanent mental and bodily incapacity; the subject of it is no longer what he was; and, worse still, he never will be.

Now all this need not be; it is in the power of almost every one to steer clear of a condition so miserable; the seeds of this disease do not emanate from the affected, will not be found floating in the atmosphere, nor can they attach themselves to your

furniture and clothes; and so poison your system; they originate with and in the individual, are but the fruits of his own injudicious conduct as regards the business of life, and might have been as readily prevented, by proper care and self-management, as small-pox is prevented by vaccination.

During the last quarter of a century, science and art have gone hand-in-hand in furthering our progress towards a more perfect state of civilization than has at any previous time characterized the history of man. By their means labour—bodily, muscular, or manual labour—is being rapidly reduced to a minimum, and mental or brainwork is being proportionately increased. So much is this the case, that as the curse entailed upon Eve and her daughters—“In sorrow shalt thou bring forth children,”—need no longer exercise its terrors upon pregnant women; so the curse which for nigh six thousand years was held good regarding one of the conditions by which Adam and his sons were to obtain food—“In the sweat of thy face shalt thou eat bread,”—need no longer be endured by men who can fit themselves for positions where their bread shall be earned by the sweat of their brains, rather than by the sweat of their brows.

Is there a handicraft whose labour has not been lightened, if not removed, by recent inventions? I leave our mills and manufactories, hydraulic powers, steam hammers and steam ploughs, machinery of

every kind and for every purpose, to proclaim the fact—that the muscles and sinews of man are no longer required to accomplish the kind of work they were but recently obliged to perform. Why, even the seamstress—whose pitiable condition and physical exhaustion called forth from the over-worked brain of the philanthropic Tom Hood one of the most pathetic ballads ever penned, “The Song of the Shirt,”—is no longer what he describes her to be, “a mere machine of iron and wood,” but has a machine of iron and wood wherewith to ply her needle and thread.

This being the fact, it is not among the working classes that we meet with examples of nerve exhaustion; the increase of machinery I have above alluded to, and its very general application, has not only assisted most materially in lessening the burden of toil to them, but it has raised their general intelligence; its effects upon the great mass of the people have been for good. It is otherwise, however, with many an inventor of that very machinery which has modified and improved the condition of the artisan. How much brain has he spent, and with what results to himself, upon accomplishing what looks so simple when done? It would furnish a most instructive and melancholy history if, with mechanical improvements and scientific discoveries, we could obtain an insight into the condition of their

authors. How many have broken down before their plans were matured after months, aye, years, of anxious experiment and doubtful strife? How many, even when their endeavours have been crowned with success, find themselves bankrupt in health, and totally unequal to enjoy their well-earned riches and reputation?

Such is the price paid by not a few of what are justly called men of genius, in their attempts to advance the cause of civilization. We can readily understand why it is so, when we consider that it is as natural for the human mind to oppose and ridicule all useful discoveries, provided they press, however lightly, on the corny toes of custom or self-interest, as it is for it to adopt whatever is new, provided it be fashionable or frivolous. Further, it is no rare thing to find the pioneers of science and art pretty hard up as regards cash, and too willing to pinch themselves and their families concerning even the very necessities of life, in order that every possible shilling may go to the development of the one grand idea, which is, at the same time, the offspring of their thoughts and the master of their actions.

If there has been a great change in the last twenty years in the means by which work is effected, there has been as great a change in the manner in which business is conducted. Speed, combination, and extension, with a system of all but unlimited credit,

are the characteristics of the age. Dispatch in business is an essential to success, although joint stock companies are no longer identified with safety.

The outcry with all is, Keep turning over your capital, never lose an opportunity of making money, sell out at a profit and reinvest in some new scheme which its promoters give out cannot fail to yield ten per cent. Now-a-days there is no such a thing as a quiet-going man of business ; that animal has become extinct, a very fossil, well worthy the attention of the archæologist, and a niche in the antiquarian section of the British Museum.

Every man knows he must push on, or be left behind ; and if the public won't go to him, why he goes to them, with his advertisements, samples, and prices. Not only so, if, after all, he fails in the business to which he was apprenticed—as money must be had by hook or by crook—he, without much ado, cuts it, and starts in a fresh line, for which he is as little fitted by education as he is by experience.

Another not infrequent cause of premature decay from nerve exhaustion I may as well mention here. Numbers of youths from eighteen to twenty-one years old, are constantly being called upon to assume the government of large bodies of workmen, and the management of extensive going concerns, simply because a favourable opportunity has offered, or by reason of the death of father, uncle, or elder brother. This early assumption of

responsibilities, whilst body and mind are still in a state of active growth, proves of itself in most cases a severe trial; heedless of this, however, we often find these lads, as soon as they are installed, set to work with improvements; in a few months they completely revolutionize the whole internal economy of the largest establishments, which of necessity leads to great dissatisfaction among the older hands, as they invariably look upon all new-fangled ways as but precursors of disaster. In too many instances the only disaster that can be traced to the excess of activity on the part of the young master, will be found in his broken health and shattered frame.

Moreover, our systems of railways and electric telegraphs—our improved postal arrangements, domestic and foreign, have increased facilities for the transaction of business by mercantile and professional men a hundredfold; and with this increase of accommodation, there has, of necessity, been a commensurate increase of individual responsibility and anxiety, of mental excitement, of wear and tear of brain. Turn where we will, we must allow that headwork is superseding bodily, and that the minds of all classes are becoming more and more developed; whilst their physical capabilities are, comparatively speaking, becoming of less and less importance. Need we wonder, then, that the brain, thus called upon to do so much work, should occasionally show symptoms of fatigue, get used up, become jaded, and that, if unrefreshed by rest, it should wear out.

CHAPTER XI.

SIGNS OF JADED BRAINS.

THE symptoms presented by this class of patients are not very generally recognised at a glance; they are deeper than the surface, and frequently exist in men one at first sight would suppose had nothing to complain of in the way of illness. We shall let the sufferer tell his own tale.

The account given by a patient, suffering from an overworked brain, is somewhat to the following effect:—
“There is really little the matter with me; for some time back I have been out of sorts, found myself unequal to my work. Of late I don't think my memory is so good, and I can't manage to write very well, or even read. My mind, somehow or other, gets confused when I make the attempt. I don't relish my food; don't sleep so well; and the worst of it is, I can't get my bowels to move without medicine. My doctor has advised change of air, and I may be here for ten days or a fortnight.”

Such is the description of a man whose brain is moderately jaded; you will observe it abounds in negatives. I shall now let the thoroughly jaded describe his condition:—"I am and have been for long in bad health. I feel utterly undone; fit for nothing. My mind is so bewildered, I sometimes fancy I'll lose my reason. I am gloomy and depressed; have lost all my strength. Lately my appetite has completely failed, and I can get no sleep. I have tried to continue at my work, but am forced to give it up. I have taken all sorts of medicine, and am no better, but worse." His account abounds in positives.

Special Symptoms.—On examining such cases, the first thing that will strike you is that the features have lost their animation, and express a state of passive suffering. The tongue is more frequently moist and clean than otherwise; the pulse varies in rapidity, according to temperament, but is *always deficient in power*. The skin is generally cool, and the muscular tissue *flabby*. In cross-questioning them, you will find that for the last ten, fifteen, or twenty years, they have been kept hard at work, at the desk, in the study, at the warehouse or works; that their meals have been irregular, and commonly the food has been bolted; that the pressure of business has been gradually increasing; and, frequently, that the introduction of new machinery into their works, or of new branches into their trade, has entailed upon them a great amount of bother and worry;

and that this has been followed by a strange sensation in the head, not amounting to pain, more a sense of weight or tightness. Memory is also impaired, the temper is easily ruffled, and the spirits readily depressed. One symptom which I have always observed, and to which I wish to call special attention, is *the loss of natural affection and sympathy for others*. This may be partial or complete, but more or less it is *invariably* present. As might be expected, symptoms of dyspepsia are commonly complained of, with constipation; but more frequently there is a feeling of sinking at the pit of the stomach, arising from exhaustion of the solar plexus of the sympathetic nerve. Moderate muscular exertion is followed by immoderate fatigue, although no wasting of the muscles may be detected.

The urine sometimes appears healthy, but most frequently contains large quantities of urea; sometimes, on cooling, it remains perfectly clear, but deposits numerous cayenne-pepper-like crystals of uric acid; occasionally I have found oxalate of lime in abundance; in fact, the urine will present characters according to the diathesis of each patient. At the same time I have never found it show any but acid reaction.

In cases of long standing the shaky hand, or unsteady gait, involuntary twitching of the muscles, or dragging of the limbs, indicate that the nervous system has become seriously involved, and are too frequently the precursors of some organic lesion in the brain or spinal

cord. Sometimes a sense of numbness in an arm or leg is felt; at other times partial anæsthesia may affect a portion of the cutaneous surface.* Sooner or later the various functions of the body are implicated, and above all, assimilation is interfered with, the blood becomes deteriorated, the fibrous tissues of the body lose their *tonicity*, and the individual is in the most favourable condition to contract any disease that may be prevalent. If any local ailment be present—an ulcer for example—it proves most obstinate, and for the same reason a trivial accident or the simplest surgical operation may be followed by fatal results, as the following case will show:—

A. B., æt. 48, a fine, healthy-looking man, came to Harrogate on account of prurigo, which had long caused him great annoyance. He attributed the cutaneous disorder to constant mental anxiety in business matters. For twenty years he had carried on a large concern as a public carrier, and the responsibilities attending it had proved too much for his head. He felt quite unequal to business, and exhibited many of the symptoms I have already enumerated as peculiar to an exhausted brain. A fortnight after his arrival the skin was much better, but about then a small boil made its appearance on the buttock, and, as it interfered with his comfort in sitting,

* I have met with cases of functional paralysis of one eye, or ear, where sight and hearing were for a time completely lost; in other instances the sense of smell has been similarly affected.

I advised him to have it lanced. To this he consented, but evinced the greatest terror at the operation. A small quantity of unhealthy pus escaped; a poultice was applied, and I looked for nothing but relief for my patient. In this I was mistaken. I was sent for at night, and found him nervous and excited; face pale, eyes staring wild, pupils dilated, skin cold and clammy, pulse quick and jerky. He said he had never recovered the shock his system received by the operation. I prescribed morphia, with sweet nitre and camphor, every four hours, and brandy and beef-tea as food. Next morning I learned he had passed a very bad night, and that he had been frequently delirious. I need not dwell upon this case; it turned out one of irritative or nervous fever, and resulted in death on the seventh day after the operation.

Classes Suffering.—Patients suffering from exhausted brains form a much more numerous class than even the general practitioner would be inclined to believe, whose practice is confined to a limited area. If you wish to know how common they are, ask any consulting physician in large practice, or go to any of those places resorted to by the sick in search of health. I imagine that four-fifths of the inmates of all hydropathic and kindred establishments have no complaint, no bodily disease, but are examples of over-worked brains; and I doubt not, in a few years, many will be brought within the walls of lunatic asylums from the same cause.

All classes of society add their quota to the long list of the mentally used up. The mercantile, from its numbers, as well as from its peculiarities, furnishes the greatest portion; and when we consider that most of these men have been engaged in large speculations—any one of which might make them rich or poor—that consequently their minds must be perpetually on the stretch, always, sleeping or waking, in a state of suspense, the wonder is that they continue serviceable so long, not that they occasionally give way.

When to the anxieties of business such men (as they very often do), add the cares of office, in the Municipal body, in charities, or take an active part in politics, the strain being the greater, the chances are the consequent nerve exhaustion will be in proportion, and so it is. I am convinced that such is particularly the case with men of keen sensibilities and refined minds; earnest and active, they are being continually thwarted or hindered in their good works in a hundred ways I need not particularize; their spirits fret; their systems get out of gearing. Sleep becomes more and more difficult, and they soon have to give in from sheer lifelessness.

Among professional men I have noticed that the clergy, especially the clergy of the Church of England, are very liable to a break down. Nor is this to be wondered at, considering the nature of their duties and the monotony of their services—fancy any man reading prayers thrice on a Sunday, having funeral, baptismal, and the

churching of women service to perform; add to these a morning class and a sermon or two, and when all is done, the workman is not paid according to the amount of work, but inversely. Can we wonder at failure of nerve power here? Can we wonder that the Mondayish feeling of exhaustion should lead to daily seediness, accompanied with a spirit broken, and a frame bowed down; that there should be no spring left in such a man; that he should look and feel overpowered, jaded?

Lawyers afford us few examples of this disease of the times. They are not only a hard-headed lot, but they have their codes to guide them, records to fall back upon, and authorities to consult in all cases besides, they are seldom called upon to act suddenly—all must be done in legal form, the majesty of the law must not be hurried, and consequently its professors are allowed time to arrange their thoughts and mature their plans. Their brains are seldom weakened by being kept in a state of active tension, consequently they rarely show symptoms of decline.

Members of our own profession are, I think, peculiarly exempt from nervous exhaustion, however subject they may be to physical—not that we are deficient either in mind or emotional feelings, but because our thoughts are rarely allowed to dwell long on the same subject. Each case brought before our notice presents different features to its fellow, and this constant variety serves to strengthen and invigorate the mind rather than impair

it; besides, in the exercise of our calling, there is a happy mixture of the mental, emotional, and muscular faculties, which ought to have a wholesome influence in keeping our minds and bodies in a healthy condition.

I shall close my observations by a few general remarks upon the treatment which the exhausted brain requires. I shall speak first of the preventive. There is an old adage, "Too much work and no play, makes Jack a dull boy;" no one denies such to be the fact, and now-a-days, we are all bound to admit that what is true of the boy, is equally true of Jack's hard-working father—too much work, too little relaxation from business, is making him dull in the same way and sense.

Whenever one meets with such a case, some advice, such as the following, will prove invaluable. Shorten your hours of work; if you find ten hours too much, try eight or six; take half-an-hour or an hour in the middle of the day to yourself, and when the allotted time for work is closed, leave your desk or office—or whatsoever your place of business may be called—but leave also your business cares shut up in it; don't take them home with you, to make you and everybody in it thoughtful and gloomy and miserable. When possible, get all work over before dinner, mingle in society, and indulge moderately in what straight-laced people call its frivolities; try to take an interest in every one and everything about you; if you have a hobby, cultivate it, whether it is for a cow or a cucumber; if you have no

particular taste, attach yourself to, and assist some one who has ; as you are required to avoid excess in business, avoid every other excess, and keep early hours ; according to your means, take walking, riding, or driving exercise.

As a preventive, I know nothing more likely to benefit any one who has much head-work, than the daily use of alcohol in some form or other. I am not going to enter into the question whether stimulants of that class act as food, or merely retard the waste of tissue ; all that I have to say is, that from experience, I know that they give tone to the nervous system—are, in fact, as much food to the mind, as beef and mutton are to the body. Many a patient who, from habit or principle, abstained from all intoxicating drinks, has found a wonderful stay in a few glasses of good wine, or some spirit and water ; my usual allowance to patients requiring it, is a tablespoonful of brandy and water in the middle of the day, a half-pint of sherry during dinner, and a glass of grog at night ; with the latter, a good cigar or pipe of tobacco may be indulged in—not only with safety, but with advantage.

Another means of prevention will be found in men continuing to play the active games of their boyhood as long as they can ; and I strongly advise the regular resort to the cricket field, racquet, tennis, or fives courts ; nothing tends so much to refresh an overworked mind as active bodily exercise, especially when this exercise

is of an agreeable, social kind. For men of 40, 50, and even 60, fives is a most suitable amusement—unfortunately it is little known. It requires a court, one-tenth the space of a racquet court, at one-tenth the cost; it can be played by two or by ten—five on each side. It brings into play the various muscles and joints, induces free lung action, in a very short time establishes abundant perspiration, and in an hour or hour and a half makes one feel comfortably tired. This game gives more healthy excitement to the body, and consequently more mental abstraction in half an hour than is afforded by two hours' shooting, or any amount of road riding. Here I would put in another word in favour of games. Active muscular exercise is a first-rate thing for the temper; and I have no hesitation in advising a game of fives to any one who is out of love with himself and inclined to quarrel with his shadow; in half-an-hour I can almost guarantee all crustiness shall have disappeared, and everything become *couleur de rose*.

It is also of great importance that every man who has to work hard and think much during six days in the week, should rest upon the seventh. This hebdomadal cessation from the cares and vexations of business, plays a most important part as a restorative for mind and body, and cannot be neglected with impunity. Even this will not prove sufficient, and great benefit will result from occasional breaks in the business year. I

frequently say to men who get easily knocked up, take a holiday three or four times a year; ten days or a fortnight quarterly will do you more good than one or two months annually. Another important point is to insense such with the necessity of attending at once to any symptom indicative of a deranged state of health. A stitch in time here, as elsewhere, saves nine; and the man who most readily applies for medical advice, will find that he not only saves his pocket thereby, but saves his constitution.

When I have named these preventive measures, I have given you an outline of what under other circumstances, must be reckoned among the curative. That medical treatment is of great use to the mentally jaded, is a fact which the sufferers themselves readily admit; they invariably feel better after a dose of calomel and brisk purgative. It is even a difficult thing to persuade them that their symptoms depend upon anything but derangement of the digestive organs. One is firmly convinced that his case is "all stomach;" another, "liver;" a third, "a sluggish state of the large bowel;" and it is only after you fail in removing his symptoms by the exhibition of stomachics, alteratives, and cathartics, that he begins to see that medicine with diet and regimen will not make a new man of him. If he desires health he must for a time abandon work.

Among tonics, the various preparations of iron, bark, nux vomica, and phosphorus are much relied upon, and

doubtless as adjuvants to rest, these play a most important part in restoring health to a debilitated body, and, indirectly, they may thus act favourably upon the enervated mind; but they cannot impart to it that vital principle, the exhaustion of which has led to that diseased condition, which I, in the foregoing remarks, have most imperfectly attempted to portray under the name of jaded brains. For their cure, it is essential to lay all business and its cares completely aside. To do this effectually, the patient must leave home and old associations, and give himself up entirely to amusement. If fond of sport, he cannot do better than take to his gun, or rod, or indulge in a gallop across country with the nearest hounds. If no sportsman, let him betake himself to one or other of the many health resorts at home or abroad, where he will find, in early hours, perpetual outings, agreeable excursions, pic-nics, and evening reunions, the best means of forgetting himself—the best medicine for imparting strength to his enfeebled body, and vigour, life, to his exhausted brain.

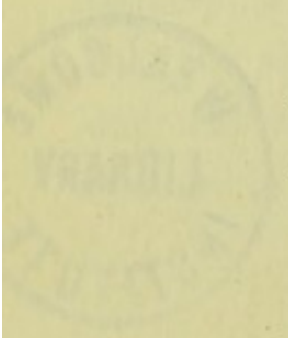
Finally, I have to apologise for having treated this subject under a popular name. However, in doing so, I think it will be admitted that I have acted prudently in avoiding an error which might have been easily made, namely, that of giving a wrong name. Considering that the science of psychology is in its infancy, and that our knowledge of the functions of the sympathetic system is very imperfect, I think we could not, with

anything like certainty, assign to its proper cause the symptoms I have spoken of as indicative of nervous exhaustion. Admitting this, I would, at the same time, point to the fact, that our great intellects and profound thinkers—men of genius, philosophers, statesmen, scholars—men who actually work their minds night and day—are not, as a rule, afflicted with what I have described as jaded brains; and that the men who are, as a rule, are neither remarkable for mental culture, nor for the possession of master minds, although they may be remarkable for the energy and enterprise they display in their intercourse with their fellows. The inference I feel disposed to draw is, that the anxieties, cares, and doubts which beset the business man, tell, first of all, upon his sympathetic system, the nerves of organic life, and through them, upon the brain, cerebellum, and spinal cord.



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