

HYDROPATHIC STATISTICS;

OR A

LECTURE ON HYDROPATHY,

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AT THE

Polytechnic Institution, Birmingham.

BY

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LECTURE ON HYDROPATHY.

LADIES AND GENTLEMEN,

I BEG to direct your attention this evening to the mode of treating disease known as the Hydropathic System. This system, which has scarcely been in existence 24 years, has already made a great number of proselytes both abroad and in this country. Establishments for the cure of diseases by water exist in every continental state, as well as in America and Great Britain. At Batavia and Alexandria, successful attempts have been made to introduce the practice among coloured and oriental populations; and I am informed that an establishment, or establishments, will shortly be founded for the benefit of our countrymen residing in British India. In England there are numerous establishments—in Scotland there are two—in Ireland one. Medical practitioners of the greatest eminence have borne favourable testimony to the merits of hydropathy. Among these, it will be sufficient to enumerate the names of Dr. Forbes, physician to Prince Albert; Dr. Carpenter, author of the best English work on Physiology, and editor of two medical periodicals; Dr. C. B. Williams, late professor of Medicine at University College, London; the late Dr. Andrew Combe, whose works have enjoyed a popularity beyond that obtained by any other medical writer; Dr Pereira, author of the best work on Materia Medica, and physician to the London Hospital, and the late Mr. Aston Key, chief surgeon to Guy's Hospital, London. All these gentlemen have, in their writings, alluded with respect

and good-will to the practice of hydropathy. Mr. Key, however, has not, to my knowledge, given a public opinion upon the subject, but he has recommended patients to place themselves under my father's care. It is to be observed, that the water-treatment is not practised by unqualified men. The chief professors of this system in England, are men educated in all the knowledge of the schools, instructed in anatomy, physiology, medicine, and every branch of science required of a medical graduate. Dr. Edward Johnson, Dr. Gully, Dr. Wilson, Dr. Macleod, were all legitimately engaged in medical practice, previously to their adoption of the system which they at present profess; so that, whatever other charge may be brought against them, that of ignorance is certainly untenable.

At the very outset, it is necessary for me to declare that I do not advocate the water-treatment as a panacea. There are many diseases which neither hydropathy nor any other system can heal, and there are some diseases which resist hydropathic treatment, but yield to a judicious eclectic method. At the same time, the catalogue of maladies curable by water is very extensive; and I do not hesitate to pronounce my conviction that water, properly applied, is capable of curing or relieving more diseases than all the drugs of the Apothecaries' Company. Let me be understood to blame not the use but the abuse of drugs. I blame the indiscriminate dosing which finds favour in the eyes of Society. It is believed by thousands, that for every pain and ache incident to humanity, a specific remedy may be found in the apothecary's shop; and accordingly, they meet every trivial complaint by some mysterious compound, swallowed in the shape of pill or mixture. Hundreds of persons of a sickly constitution, attacked by disease, drag on a wretched existence from year to year, sometimes improving a little in health, sometimes relapsing, yet during the whole period swallowing with undiminished confidence diurnal doses of tonic or laxative medicines. It is in vain to urge that, notwithstanding the various prescriptions written and compounded in their behalf, the disease has obstinately maintained its ground; it is in vain to argue that these compounds, nauseous to the taste, and alien to the economy, when they do no good, do always harm, the poor prejudiced patient sighs

a feeble dissent from your opinions, and continues to swallow the periodical dose which he considers essential to his existence. It is to persons whose life has been rendered, in the first place, miserable by disease, and in the second, intolerable by drugging, that hydropathy particularly addresses a voice of earnest exhortation. To such as these it cries:—Away with flannels and comforters—away with pill-boxes and mixtures—draw back the bed curtains, open the windows, and instead of cringing by the fire, out into the bracing air, and invigorate your languid frames by the healthful stir of exercise. Abjure the exhausting stimulus of wine—drink only water—and then to those who can so far awaken from their torpid irresolution, as to hearken to the summons, and throw themselves into the arms of the water-cure, it promises a renewed health, and cheerful spirits, and a sturdy, vigorous frame.

In place of detaining you by an historical account of the imperfect antecedents of the present system, and occupying your time by quoting what was known to the ancients of the remedial virtues of springs and rivers, I shall pass at once to a description of the origin and development of hydropathy, as it is. A family of the name of Priessnitz has, for upwards of two hundred years held an estate comprising about 180 acres of land, at Gräfenberg, in Austrian Silesia. Of this family was born, on the 4th of October, 1800, a child who was named Vincent. When about twelve or thirteen years of age, it happened that this lad sprained his wrist, and treated himself for the accident by pumping water upon the bruised part, and wrapping it afterwards in a wet bandage. An eruption appeared upon the wrist, and the sprain was soon well. Other cases of sprains, cuts, and bruises, coming under his observation, he recommended to his neighbours the simple process which he had followed himself. Brief experience taught him that the wet bandage alone chills the part to which it is applied; he therefore adopted the plan of covering the wet bandage with a dry one. He found that this addition prevents evaporation, produces speedy warming of the bandage, and favours the appearance of the rash, which by this time he began to consider as evidence of some impurity of the blood making its way out of the system. The fame of his success in treating sprains, cuts, and bruises, spread among his neigh-

hours, and persons suffering from other local affections, as rheumatic joints, local pains, etc. began to seek his advice, which was freely given. 'When sixteen years of age, after loading a waggon with hay, Priessnitz was standing at the horse's head, whilst his companions were cogging the wheel; before this was effected the horse struggled, overcame him, and rushed down the hill, which was very steep. Unwilling that the animal should destroy itself, Priessnitz would not relinquish his hold, his foot caught in a bush, and he fell between the horse's feet, was dragged, trampled upon and severely bruised. He was taken up senseless, with two of his front teeth gone, and three ribs on the left side broken; he was carried home and a doctor sent for, who, after causing great pain by probing and punching the side, applied his remedies, at the same time prognosticating that his patient would never perfectly recover. Priessnitz having no respect for treatment nor opinion, declined the doctor's further attendance. He then began to manage himself. By frequently holding his breath, and pressing his abdomen on the side of a table for a painful length of time, he forced back the ribs into their proper position. Wet bandages were constantly applied and changed, and water drunk in abundance. By perseverance in these means he rapidly mended, and in twelve months his health was completely restored.' This event naturally enough emboldened Priessnitz to extend his method of treatment by wet bandages, pumping, and ablution, to other maladies, and to invent new and varied means of employing the simple element against the proteiform phenomena of disease. In this gradual manner the acute mind of Priessnitz developed the system which I present to your notice this evening; a system which, while it claims the approbation of the philanthropist, from its extensive applicability to the alleviation of human suffering, will charm the philosopher, from the many beautiful specimens it exhibits of inductive reasoning, and of abstruse chemical doctrine, illustrated by a multitude of familiar operations. In the year 1826—according to Dr. Weiss—consequently in the 26th year of his age, Priessnitz first began to treat internal disease. Previously to this date, his practice was confined to the population, and principally the poorer population, of the neighbourhood, among whom his treatment had proved so

successful, that while some of the superstitious peasants looked upon him with horror, as a person in league with the powers of darkness, many honoured him as a prophet, or considered him a special instrument of Divine mercy. Sponges used by him in washing his patients, were regarded as talismans, as containing within them something gifted with a mysterious and marvellous operation; and some ingenious individuals placed broomsticks across his doorway, to see if he could get over without displacing them; for it is a prevalent belief in those districts, that none but persons skilled in magic can surmount this difficulty. The opponents of Priessnitz took advantage of this disposition of the people, and their opinion that he was possessed by an evil spirit was encouraged by the priests, who denounced him publicly in the church. Some idea of the excitement that prevailed may be gained from the fact, that the peasantry were in the habit of throwing stones at the early visitors to his house.

This absurd clamour, however, defeated itself—Priessnitz's reputation extended rapidly—strangers from distant parts came to Gräfenberg, so that he was compelled to increase the size of his house for their accommodation; and thus was founded the first hydropathic establishment. Envy and jealousy, however, still dogged his footsteps. The two medical men, and the Burgomaster of Freiwaldau, engaged in a conspiracy to crush him. For thirteen years a diligent espionage upon his conduct was maintained. He was frequently brought before the Syndic at Freiwaldau, but all endeavours to convict him of any unlawful act (which the administration of drugs or herbs in an unlicensed practitioner would have been), had failed, when in 1828 a more determined attempt was made to put an end to his proceedings. Witnesses were brought forward to prove that he had injured them, and others that he had pretended to cures that had actually been performed by the medical men. But none, when examined, could deny that Priessnitz had benefited them, and taken no payment in return. Among other witnesses a certain miller, whom both the doctor and Priessnitz claimed the merit of curing, appeared. On being examined, the miller was asked which of the two had effected the cure? 'What shall I say?' answered he: '*Both*; the doctor relieved me of my money, and Priessnitz of my

disease. In return I have given him nothing—not even thanks, which I take this opportunity of offering him for the first time.’

Priessnitz was next accused of illegally tampering with the public health, and was ordered to be put under arrest; but an appeal to a higher tribunal caused this unjust sentence to be reversed; and he was then permitted to have a cold-water bathing establishment. Irritated at their defeat, the persecutors of Priessnitz brought the case again before a different tribunal, the result of which was, that Priessnitz was enjoined to confine his practice to the inhabitants of his own parish or district. To this ridiculous command he replied, that water is free to all, and that he was not accustomed to inquire whence an invalid came previously to administering aid. Accordingly he continued to act as before, and no further notice was taken of his proceedings. In 1830 Priessnitz had already fifty-four patients, whom he treated, with marked success, with cold water only. ‘The fame of this new mode of treatment,’ says Dr. Weiss, ‘spread with incredible velocity; and patients of all grades, foreign and native, of all ages and sexes, were seen wandering for relief towards Gräfenberg to the quiet and rustic residence of Priessnitz: Prussians especially, and persons of rank and influence, were the chief supporters of this method. In 1831 a cry against Priessnitz was raised by the medical men of Vienna, who brought the subject under the notice of the Emperor Francis. In consequence of these complaints, Dr. Bacon Turekheim, at the head of a commission of district and staff surgeons, was sent to Gräfenberg to investigate and report on the new system, and the proceedings of its originator. Again, in this instance, the calumniators of Priessnitz unwillingly contributed to advance his reputation; for the report of the commission was of so favourable a character, that Priessnitz was allowed by imperial authority to carry on his establishment, with the addition of the privilege enjoyed by staff surgeons, of giving sick certificates to public employés and officers under his care. From this period, although subjected to various minor annoyances, the founder of hydropathy experienced no active aggression on the part of his enemies, but was at liberty quietly to investigate a hitherto unexplored branch of the remedial art; and in 1835 the hydropathic

treatment had reached its present grade of development. The fame of Priessnitz and the water-cure continued to spread, so that between 1829 and 1842 he had treated 7,000 invalids, among whom were personages of the highest distinction. In the year 1845 the Archduke Charles of Austria visited Gräfenberg, manifested great interest in the water-cure, and treated Priessnitz with marked consideration. In 1846 a gold medal, called the Medal of Merit, was decreed to Priessnitz by the Emperor of Austria, and was presented to him by the Governor of Troppau on the 7th of July, 1846, at the altar with great ceremony, in the very church in which he had formerly been denounced.

Now, what is the nature of the system the introduction of which heaped, in the first instance, so much obloquy upon the head of Priessnitz, and procured him afterwards favour among the people, and honour from princes? Is it, according to popular belief, a system of guzzling water from morning till night? Do the patients pass their days submerged in water, and their nights in damp beds? Is an hydropathist the mere water fowl that his adversaries represent? The public idea of the water treatment is founded almost entirely upon the misrepresentations of its enemies. It is imagined to be the most cheerless, uncomfortable, and useless martyrdom to which human credulity ever submitted. It is ridiculed by frivolity, disdained by wisdom, and repudiated by common sense. 'How,' argued once a grave physician, 'can an internal disease be cured by pouring cold water upon the exterior?' 'Why, doctor,' answered an old woman, standing by, 'by the same reason that getting wet-footed without gives you the gripes within.' However, it is certain that the public mind has acquired a false idea of the water-cure. It is thought to be a system of certain misery and probable danger, whose followers are perpetually engaged in swilling water or reposing in wet sheets. Many persons, therefore, will be surprised to hear that, in establishments like that at Umberslade, a patient drinks very little more cold water than he had been accustomed to do previously to his arrival. That he takes three very substantial though plain meals per diem, and is permitted to enjoy a reasonable quantum of not too strong black tea night and morning. That water patients are, in very many cases, only

brought into contact with water for three or four minutes per diem, although it is true that, in some cases, a patient lies for half an hour or an hour packed in a wet sheet, and in some comparatively few cases, is submitted to a fall of water, which descends upon the body with some force. The uninitiated, also, will not be prepared for the assertion, which is nearly universally made by hydropathists, that far from experiencing a constant sense of dread and discomfort, they are animated by highly pleasurable sensations; that after each bath, a new-born vigor pervades every limb and organ, which they accept as a daily renewal of the covenant of health. The bath imparts a delicious glow to the entire frame: it puts to flight nervous fancies and real pain: it swells the breast with a sense of enjoyment: it produces cheerful gaiety and light-heartedness, which bears no resemblance to the false exhilaration begotten of wine. The water patient quaffs the true elixir of life. A visitor at a hydropathic establishment frequently asks, Where are the patients? He beholds a company of persons seated at table, whose vigorous appetites, cheerful demeanor, and merry laughter, betoken anything but ill health. He sees bravely breasting the hills, or trudging through the lanes, parties of sturdy pedestrians, and hears, with half-incredulous ears, that some of these persons came lame and halt and gouty to the establishment. Before entering into conversation with the guests, he is apt to believe that a hoax is being put upon him. The object of the present lecture is to place before you a plain statement of the real nature of the Water Cure—what it does—what it does *not*—and to substantiate the allegations therein made by the relation of a few convincing examples. I proceed, therefore, immediately to describe the most important processes employed.

SHALLOW BATH.

What is termed the shallow bath, is merely a tub or zinc bath sufficiently wide and long for a person to sit down with extended legs. Into this water is poured, until it rises about four inches above the bottom. The patient sits down in the water, and immediately begins to rub himself all over in front, either with his wet hands or with a towel, which he dips repeatedly in the water. He rubs his limbs, his chest, his

stomach and face, and every now and then throws a double-handful of water over his head, which he also rubs in its turn. In the meantime, an attendant is actively employed in rubbing the back and ribs from behind. The operation may last from one to ten minutes, according to the judgment of the practitioner who prescribes it, the nature of the disease, constitution, etc. On coming out of this bath, a large dry sheet is immediately thrown over the patient as he stands up, like a cloak. With this he dries himself as quickly as possible, and then dresses for his walk. It may be as well to remark here, that after all the baths, the patient is dried, not with towels, but by means of a dry sheet thrown round him. This is termed the drying sheet, and it is far preferable to towels; because, by its aid, the whole surface is dried at once, and evaporation from any part of the body—which is very chilling and injurious—is effectually prevented. It may be observed, also, that active exercise in the open air is generally required, both before and after most of the baths.

FULL BATH.

The full bath is the same as the shallow bath, except that in the full bath the water comes up to the patient's waist, instead of barely covering the legs, as in the shallow bath.

SPLASH BATH.

A small stool is placed in the shallow bath. Upon this, the patient sits, and is well splashed by the attendant.

BROOK BATH.

I frequently send the poor who ask my advice, to the brooks which abound in my neighbourhood. They warm themselves by walking, it may be a mile or more, to the brook; they then undress, sit down in the stream, if it be not too deep, and splash and rub themselves vigorously. After a minute or two, they go out, dress, and return home.

PLUNGE BATH.

The plunge bath is too familiar to require description; when prescribed hydropathically, the patient only stays in it one,

two, or three minutes, rarely longer; otherwise the reaction which is desired would not be developed.

SHOWER BATH.

The shower bath also requires no description. It is well adapted to certain healthy constitutions, but is rarely applicable to cases of disease.

WET SPINAL FRICTION.

The patient is undressed, and stands upright in a bath, or sits upon a stool, while the attendant rubs his back with a towel dipped in cold water, and wrung out more or less completely or not wrung out at all, according to circumstances. The towel is to be dipped once or more frequently into water, according to the special conditions of the case. Generally, this operation should not last longer than one or two minutes.

WET FRICTION.

The patient stands up undressed, and receives from the bath attendant a towel which has been dipped in water, and then wrung out as dry as possible. With this towel, he rubs himself all over in front, while the bathman rubs him behind with a similar towel. The operation lasts one, two, or more minutes; and when it is concluded, the patient is wrapped in the drying sheet, and dried.

UNDER-BLANKET FRICTION.

All the coverings are stripped from a bed, except a single blanket upon the mattress. Upon the blanket the patient lies down, and is covered by a second blanket thrown over him. The bath-man now dips a towel into cold water, wrings it out more or less according to circumstances, and having wrapped it around his hand and wrist, introduces his hand beneath the upper blanket, and rubs the patient's body, back and front and extremities. The towel may be dipped in water only once, or several times, and the rubbing may be continued from one or two to five or ten minutes, according to the exigencies of the particular case. This application is adapted to many cases of debility, in which exercise is impossible.

WASH DOWN.

What we call the wash down, is exhibited in the following manner. The patient stands up in an empty tub or bath, beside which stands a pail of cold water, with two coarse towels soaking in it. The bath attendant taking his place behind the patient, lifts one of the towels, all loaded with water, and lays it quietly on the patient's head. The patient immediately seizes it, removes it from his head, and rubs himself rapidly with it—his face, his throat, shoulders, arms, chest, abdomen, and legs. Having gone rapidly over the body once, he drops his towel into the pail again, which the bath-man presses down to the bottom of the water, then lifts it out, and places it on his head again. As before, the patient seizes it, and goes all over the same ground once more; and then drops it into the water, when the bath-man again lifts it, and again places it on the head, to be a third time removed by the patient, and applied as before, rapidly, actively, and energetically, all over his body in front. The bath-man is industriously occupied all the time behind in the same manner, from the back of the neck, to the back of the legs, wetting his own towel as often as he wets that used by the patient, viz: three times. This is called a wash-down of three towels. The patient is then rubbed in the drying sheet, dressed, and sent out to walk.

UPSTANDING—DRIPPING OR RUBBING SHEET.

The bath which is called the dripping sheet, is administered in the following manner:—The patient stands up on the floor, or in a tub or bath. A sheet of convenient size is then dipped in cold water, and as much of the loose water is then wrung out of it as is sufficient to keep it from dripping at the bottom. This is thrown over the patient (head and all) from behind, like a cloak; and it should be long enough to reach down to the ankles, and wide enough to enable the patient to seize those loose parts of the sheet which will hang in front, and use them as towels. With those loose portions of the sheet the patient rubs himself actively and rapidly from his face to his feet. In the meanwhile the attendant rubs him well behind—the back of the neck, points of the shoulders, ribs, spine, back of the

lower limbs, etc. But the attendant does not rub the skin with the sheet, but he rubs the sheet itself as it clings to the body, with his hand—his hand passing rapidly over the sheet, without moving it, as one may rub one's hand over a glove. This operation may last one, two, or more minutes, when a dry sheet is thrown over the patient, in which he is again rubbed till dry.

RECUMBENT RUBBING SHEET.

In certain cases where it is desirable to apply the rubbing sheet, but the patient is too weak to stand, he may be wrapped in the dripping sheet, and then allowed to lie upon a blanket thrown over the mattress of a bed. In this position he may be rubbed for the appointed time. Priessnitz has recourse to this operation in some cases of cholera Asiatica.

CAN OR PAIL DOUCHE.

The patient seats himself in an empty tub or bath; and immediately as many pails or cans of water as are ordered are dashed over him suddenly, one after the other, one before and one behind, not poured, but thrown with some force, by first a backward and then forward motion of the pail. The patient then steps out of the bath, and is dried in the drying sheet.

DOUCHE.

The douche is a column of water, three inches in diameter, more or less, rushing downward from a height of 12 to 20 feet. The douche is taken in the following manner:—The patient should first place himself close beside the column of water as it falls, and fix his eye upon it. Then he should extend his right arm under it, making it run up and down his arm for a moment or two. The douche should then cross over the back of the neck, and run up and down the left arm. The patient must then bend his head somewhat backward, and allow the water to strike obliquely against his chest, and bending more backward still against his abdomen. Next stooping forward, he is to receive the fall upon the back of his neck, and cause it to run up and down his back. After this he should recede a little, and take the water upon his

extended legs and feet, in the same way as he previously received it upon his arm. In short, the douche should play over the whole body—over every portion successively, except the head. When standing directly under the douche, the patient should guard his head with uplifted and clasped hands, as a swimmer protects his head previously to plunging into the river. The whole operation of taking the douche is usually concluded in one or two minutes. This bath, so terrible to him who stays fearfully at home, and receives as gospel all the fables which are narrated of hydropathy, is however one of the most bracing and delightful processes of the system. It is never ordered but to persons possessed of considerable power of constitution, and after suitable training. A great many patients never take it at all.

WET SHEET PACKING.

We now come to speak of the crowning glory of the water-cure—of a discovery which, before fifty years are past, will place its author in the world's estimation upon a par with the discoverers of vaccination, and of the circulation of the blood—of a remedy which reduces inflammation as speedily as the lancet, but is followed by none of that debility which results from loss of blood—which combines the soothing properties of opium, with the tonic power of quinine, which suddenly quenches the fires of fever, and slowly extracts from the blood the poisons of gout and of rheumatism. In acute disease, and in chronic disease, its blessings are equally marked; and, in short, it approaches nearer than any drug or medicinal application yet known, to a panacea. Those who are familiar with the processes of hydropathy, will not deem me extravagant in praising thus highly the utilities of the process which I proceed immediately to describe. Remove from any ordinary bed every covering but the mattress, upon which a pillow is to be placed for the patient's head. Upon the mattress, and extending partly over the pillow, two blankets are to be spread; and upon the blankets lay a sheet which has been dipped in cold water, and then wrung out as dry as possible by two persons' strength. Upon this damp sheet the patient is to lie down undressed, with his head reposing on the pillow. The sheet is then folded tightly round the body, and the blankets are

folded round the sheet. When this is completed, several other blankets, one after the other, are laid upon the patient, and tucked well in round him on each side, so that he lies completely encased, and unable to stir hand or foot. In some instances, the blankets are not sufficient, and a small feather bed is superimposed. A linen napkin is generally introduced between the patient's chin and the blankets, in order to prevent irritation of the skin by the coarse woollen fibres. In this condition, the patient is to lie a quarter of an hour, half an hour, an hour, or longer, according to circumstances. At the expiration of the prescribed time, he is taken out of the packing, and immediately submitted to one of the forms of bath described a short time since, viz. the shallow bath, dripping sheet, wash down, or pail douche. He is then dried in the drying sheet, and either sent out to take exercise, or put to bed, according to the necessities of the disease. This process is termed the wet sheet packing.

HALF-WET SHEET PACKING.

The half-wet sheet packing is performed exactly like the whole wet sheet packing; but the sheet extends only from the arm-pits to the knees; and the arms are not included in the sheet, but only in the enveloping blanket.

FRONT AND BACK TOWEL PACKING.

In these operations, the patient is enveloped in the blankets as in the preceding bath, but instead of a whole, or half-wet sheet only, a wrung-cut towel is spread over the front, or under the back of the body, between the body and the blankets.

STEAM OR VAPOR BATH.

There are many methods of exhibiting a vapor bath. The following method answers very well, when no convenient apparatus is at hand, and is well adapted to domestic purposes. The patient seats himself naked on a chair, and is then covered up in two large blankets, one of which is thrown over him from behind, and covers the back of the chair, while the other protects the knees and front of the body. The blankets are tucked tightly round the neck and pinned together,

and should be sufficiently ample not only completely to envelope the chair and the whole person, but to droop for some little distance upon the ground. The patient being comfortably settled, with his feet resting upon an ottoman or stool, if the seat of the chair be rather high from the ground, a shallow pan, the area of which should not be less than a square foot, is pushed under the chair, and a brick previously heated as hot as possible, is by the aid of tongs deposited in it. A quantity of boiling water sufficient to half cover the brick, is next poured into the pan, and a gush of heated vapor instantly rises. As soon as the development of vapor seems to languish, the brick should be turned, so as to bring its dry surface into contact with the water. Generally speaking, the patient should be taken out of this bath at the expiration of ten or fifteen minutes, although, in certain cases, it may be prolonged beyond this period. While sitting in the bath, the patient should drink more or less of cold water; and if he feel faint, his face and forehead should be wiped with a towel dipped in cold water. Two or three minutes before the conclusion of the bath, it is, in some cases, useful to pour a table spoonful of ordinary domestic vinegar upon the smoking brick. The acetic vapor which rises slightly stimulates the skin, and imparts a sensation of freshness which is desirable. From this bath, the patient steps into a tub or zinc bath near at hand, and undergoes the wash down, pail douche, or dripping sheet operation. Sometimes, instead of these the plunge, or shower bath, or douche is prescribed. In certain cases, instead of going into the cold bath, the patient is wrapped up in heated blankets, and put to bed, where he is allowed to lie until the perspiration and general excitement of the system have subsided.

This form of bath I have used extensively among the poor, and can recommend it highly. By its means I have cured diseases which had defied all ordinary remedies, and which promised to embitter the whole future existence of the sufferers.

HOT AIR BATH.

The patient sits wrapped up in blankets upon a chair, beneath which a spirit lamp, enclosed in a guard, is burning. The heated air, coming in contact with the body, quickly

produces perspiration, which is the effect desired. In most cases the hot air is far inferior to the vapor bath.

BLANKET PACKING.

The blanket packing is performed exactly as the wet sheet packing, omitting the wet sheet. Everything having been removed from the mattress, a pillow is placed upon it for the patient's head. Upon this mattress, and extending over the pillow, two blankets are spread. The patient lies down on his back, perfectly unclothed, upon these blankets, with his head comfortably placed on the pillow. An attendant now approaches, say on the patient's left, and first puckering the blanket from the back of the head down to the back of the neck, reaches across his chest, seizes the right upper corners of the blankets, brings them tightly across under the chin, to his own side (the left), and tucks them well and evenly under the left shoulder, where it joins the root of the neck, and under the point of the same shoulder. He now reaches across the body again, and brings over all the rest of the right sides of the blankets to the left side of the patient, and then proceeds to tuck them well and evenly under his left side, beginning where he left off, at the point of the left shoulder, and proceeding quite down to the heels. The patient is now entirely enveloped in one half of the blankets, and the attendant finishes the operation by passing over to the right side of the patient, and then proceeding to tuck the left sides of the blankets under the right side, precisely in the same manner as we have just seen him tuck the right sides of the blankets under the left side of the patient. The attendant, standing on the right side of the patient's legs, finally insinuates his left hand under the backs of the ankles, lifts them up, and then with his right hand turns back the loose ends of the blankets under the heels. Four or five other blankets doubled are laid over all, extending from the chin to below the feet, and these superincumbent coverings are pressed down closely against the sides, and a napkin is placed under the chin to prevent the tickling effects of the woolly fibres. Over these a small feather bed or eider-down quilt may be placed. As soon as the packing is concluded, the window should be set open. If the head get uncomfortable, a wet towel may be applied to it.

To expedite perspiration, the patient may drink a considerable quantity of weak black tea. Perspiration will appear sooner if the patient makes some little exertion; but it is rarely elicited before two, three, or four hours have elapsed. After the packing, the patient takes some form of cold bath.

HEAD SHALLOW BATH.

A person lying upon his back reposes the back of his head in a conveniently shaped pan, containing water an inch or two deep. After a time the patient turns on his right side, and immerses the right side of his head and face in the water, and after a brief period turns again on his left side, and serves the left side of his head and face in the same manner.

HEAD DOUCHE.

The patient frees his or her neck from every tight restrictive covering; and, if it be a lady, takes all the combs, pins, etc. out of her hair, which she throws forward over her head in the shape of a long rope. A blanket is thrown round the shoulders, and brought closely round the neck; the patient kneels down, and hold his or her head well forward over a shallow bath or tub, or similar vessel, while an attendant empties over the occiput or back of the head one, two, or more cans of water. The patient rises, the head is wiped, but without much or strong friction, and the hair is adjusted. This bath has an excellent effect in stimulating the growth of the hair in persons whose hair is thin and weak.

HEAD PLUNGE.

The patient plunges his head completely over ears into a tub of water, once or more frequently.

EYE OR EAR SHALLOW BATH.

A kind of cup made to fit the eye or ear is filled with water, and the eye or ear is immersed for one, two, or more minutes.

EYE DOUCHE.

A siphon apparatus is employed when it is wished to direct

a jet of water upon the eye, or a syringe may be sometimes used.

MOUTH WASHING.

The patients are sometimes directed to hold cold water in the mouth for a longer or shorter space of time. It occasionally cures toothache.

SITZ BATH.

Water to the depth of about four inches is poured into a conveniently shaped bath, and the patient sits in it for five, ten, fifteen, twenty, or more minutes. Generally a blanket or other covering is thrown round the patient, to prevent his becoming chilled. He is usually enjoined to keep up vigorous friction of the abdomen the whole time. In cases of Asiatic cholera, Priessnitz is in the habit of employing this bath, combined with the rubbing sheet. The patient sits undressed in the water, a dripping sheet is then thrown over him, and he is vigorously rubbed by a bath attendant.

RUNNING SITZ.

This is a sitz bath, so contrived, that while fresh water is constantly running in from certain apertures, the old water is constantly escaping.

FOUNTAIN SITZ.

A person sits upon a sort of stool, with a central aperture, through which rises a jet of water.

HAND SHALLOW BATH.

Cold water is poured into a flat vessel, as a plate, and the palm of the hand is laid in the water. The water does not cover the back of the hand. When both hands are subjected to this treatment, it is better to employ different vessels. It is necessary to warm the hands by friction, both before and after this application.

HAND FULL BATH.

In this case the hands are completely immersed.

ELBOW BATH.

The elbow is immersed in water in such a way that the water completely surrounds the joint. Considerable friction is required during this operation.

ARM SHALLOW BATH.

The whole arm or fore-arm only reposes in a shallow vessel, containing an inch of water for one or more minutes. Generally speaking, friction is necessary, and exercise before and after.

ARM PLUNGE.

The arm is dipped in water, and immediately taken out and dried.

ARM IMMERSION.

The arm is immersed in water for one or more minutes.

FOOT SHALLOW BATH

Is taken precisely as the hand shallow bath, except that the sole of the foot is placed in water instead of the palm of the hand. It is generally taken for five or ten minutes.

FOOT FULL BATH.

The water comes over the instep. During this bath, the feet should be rubbed together.

LEG SHALLOW BATH.

Is exactly analogous to the arm shallow bath.

LEG PLUNGE AND LEG IMMERSION.

The leg is either plunged up to the knee or hip in water, and immediately withdrawn, or it is allowed to remain in the water one, five, ten, or more minutes.

LOCAL DOUCHES

May be applied to any part of the body.

FRICTION WITH WET HANDS.

This is a very useful mode of proceeding. It may be

administered to any part of the body, but is more frequently used to the throat than any other part. I have found it effective in cases of contracted sinews.

FRICTION WITH WET TOWELS.

May also be applied to any part of the body, but is more useful over the stomach and abdomen than elsewhere.

INJECTIONS.

Cold water may be thrown by the aid of syringes into the different inlets of the body, as the ears and nose. These injections are sometimes highly efficient.

COMPRESSES.

GRÆFENBERG HEATING COMPRESS.

This consists of a piece of coarse linen some $8\frac{1}{2}$ feet long, and 8 or 9 inches broad, furnished at one end with two tape-strings. Previously to putting it on, it should be rolled up like a surgeon's bandage, beginning at the tape end; then a portion of it, sufficient to go once round the body, should be wetted and well wrung out, and afterwards wrapped round the abdomen, the dry portion enveloping the wetted part. The whole should be fastened and kept on by the tapes. This bandage when prescribed is usually worn all day, and wetted at each bath; sometimes it is worn also at night.

CHEST BANDAGE.

The chest bandage is made of coarse linen, doubled, in the shape of a breast-plate. It should fit the chest and be fastened round the neck, under the arms, and round the waist by tapes. There should be two breast-plates, one to button into the other; the smaller one, that which is next the skin, to be wetted, the larger one to be dry.

MALVERN COMPRESSES.

At Malvern and elsewhere, instead of covering the wet linen with dry linen, they substitute oil skin, macintosh, or other impermeable material for the dry linens. This is useful in certain cases; but on the whole, the Græfenberg method is preferable.

WET CAP.

A compress similar to those above described, but covering the head, is called the wet cap.

OTHER COMPRESSES.

Compresses may be applied to the arm, leg, joints, and in fact, almost anywhere; and are frequently so applied.

TEMPERATURE OF THE BATHS.

No point in the hydropathic treatment requires greater attention than the adjustment of the temperature of the baths to the individuality of the patients. To administer to all patients water of the same temperature would, in an hydropathist, be a fault equal to that which would be laughed at in an allopathist, who should prescribe to every patient the same drug. The temperature of the baths is a point of the highest importance. In the majority of ordinary cases, the temperature of the bath should be about 50° F. It is frequently advantageous to reduce the temperature to 40° F., and occasionally to freezing point. In very many instances the temperature ought to be increased to 60° or 70°, and cases are by no means uncommon where the temperature should be as high as 80° F. The utility of baths at a higher temperature than 80° F., is limited, but they are occasionally very serviceable.

The temperature of baths may be considered as cold, tepid, warm, and hot; the actual number of degrees upon the thermometer, designating these conditions, will vary in the case of every patient. Water at the temperature of 65° F. will be cold to one person, warm to another, and merely tepid to a third. Hence, if we want to give a patient a tepid bath, we are not at once to leap to the conclusion that the temperature of the water should be 65° F. In the water-cure we frequently transfer a patient from a bath of one temperature to a bath of a different temperature—from a hot or tepid to a cold bath. On the same principle, we may prescribe for a patient a *warm* shallow bath, ordering that from time to time, *cold* water shall be poured over his back and chest. The transition is generally made from the warm to the cold bath, not from the cold to the warm, although in certain cases I

have employed the latter practice, which it is well known was familiar to the Romans, who passed from the frigidarium to the calidarium, as well as from the calidarium to the frigidarium.

I have now enumerated the principal appliances employed in the water-cure; and I pass at once to the consideration of the results of our practice. Now the effects produced by every form of cold bath are twofold, viz. those which are immediately manifested, and those which require time, and a succession of cold baths for their development. We will first consider the immediate effects.

When a person plunges into cold water, or has a bucketful thrown over him, or is rubbed with wet towels, or is packed in the wet sheet, the first sensation is that of cold, the surface of the body becomes pale, the skin is more or less corrugated, the heart beats less powerfully and frequently, and consequently the pulse is slower and feebler; and a certain impression is made upon the nervous system, manifested in delicate persons by tremor of the limbs and feelings of fear. These symptoms, however, quickly pass away, and what is called the reaction comes on; that is to say, the individual recovers his warmth, the surface of the body becomes red, the heart beats firmly, and the pulse exhibits more power; at the same time, the feeling of fear is succeeded by a sensation of enjoyment, and the tremor of the limbs is replaced by increased muscular vigor.

Analysing these phenomena, we shall find them divisible under three heads:—1st. There is loss of heat, followed after a longer or shorter period by re-development of heat. 2nd. The action of the heart and vascular system is considerably depressed, but the depression is not lasting. 3rd. A peculiar depressing effect is exercised upon the nervous system, which afterwards manifests a reaction proper to itself. Now if these be the effects of the cold bath, is it not reasonable to suppose that its agency must be beneficial in diseases attended by great heat of skin and accelerated action of the heart and pulse, as well as in certain nervous affections of excitement, seeing that the cold bath exerts so powerful an influence in depressing over-excitement, and restoring healthy tone to the circulating

and nervous systems? That is to say, is it not at least highly rational to employ the cold bath, in some form or other, in cases of fever and inflammation where the skin is excessively hot, and the pulse exceedingly quick? Is it not also rational to employ the cold bath in cases of convulsions or fits, in order to quiet the excited nerves?

Accordingly, it is the general practice of hydropathists to treat febrile, inflammatory, and acute nervous maladies by the application of cold water. In the treatment of fevers and inflammations the wet sheet packing is preferred, but in convulsions, and most other nervous affections, the shallow bath and its congeners are more proper. The reason of this difference is easily deducible from the consideration of the nature of the different processes. The primary impression of cold made by the wet sheet packing is less severe, but it is continued for a longer period; hence the reaction, or return of warmth and vigor of circulation, is also more gradual and less intense, because rapidity of reaction depends upon suddenness of impression, and intensity of reaction depends upon intensity of impression. For this reason the wet sheet packing, which produces a slow and gentle reaction, is preferable in the treatment of fevers and inflammations, to those baths which are followed by a sudden reaction; while the shallow bath, affusion, and the like, are appropriate to nervous affections, for the very reason that renders them inappropriate in the treatment of fevers and inflammations.

When a healthy person lies down in the wet sheet packing, a considerable quantity of heat is at once abstracted, and he feels chilly; but in a short time the powers of the system reproduce an equivalent amount of heat, and a genial warmth is experienced. At the same time the action of the heart and arteries is depressed, a soft languor steals over the frame, and a strong disposition to sleep, nay, frequently actual slumber, takes possession of the experimenter. There is something extremely agreeable in the effects of this process—enervating and debilitating, it is true, if unduly prolonged; but inexpressibly soothing and restorative in feverish and many other conditions of the system.

Nearly every one who has tried the experiment will bear witness, that the sensations which he experienced were those

of tranquil repose. Excitement is subdued, pain is alleviated, and the soul is insensibly charmed into forgetfulness and slumber. The fumes of opium and of hachish lull the smoker into a sweet dream of happiness, but the evanescent delight is succeeded by misery and pain. Our talisman of slumber produces a condition of mind and body scarcely less luxurious, but *its* consequences, unlike those which result from the use of the oriental drugs, are renovated health and enjoyment. These properties peculiarly fit the wet sheet packing for the cure of fever, and it is accordingly used with great success in the treatment of this disease.

In confirmation of this assertion, instead of quoting cases related by professed hydropathists, or referring to my own experience of the subject, I prefer reading to you some extracts from a letter written by T. H. Stallard, Esq., Surgeon to the Leicester Dispensary, and published in the 'British and Foreign Medical Review,' together with some editorial remarks complimenting Mr. Stallard upon his boldness and good sense in stepping out of the routine of his profession, and adopting a useful practice, even although it was originated by an uneducated farmer. The letter is dated Leicester, Nov. 18th, 1846. It runs thus:—

'MY DEAR SIR,

'Although personally unknown to you, I have ventured to send you the enclosed paper, containing notes of some cases of fever treated by me in the Leicester Temporary Fever House, by the application of cold water. During the autumn, fever has raged here to a degree far greater than usual, and the Board of Guardians have established a temporary fever house, in which I acted as resident surgeon for a month. It was during this residence that your article on Hydropathy (in the last number of your Journal) came under my notice, with the treatment of Dr. Currie in fever. This so engaged my attention, that I requested my father, one of the Union medical officers, to place *his* share of cases under my charge, in order that I might give cold water a fair trial. The cases I have reported are not *selected* cases; they are those that presented themselves as being most proper for the trial, and are all which came under my *entire* observation in the institution. I may, however, remark that the same plan has since been carried out by my father in all recent cases with the most decided success, and I myself have frequently employed it with like

benefit in private practice. The mode of proceeding was as follows:—The patient was stripped naked, enveloped in a cold wet sheet, and covered with a blanket. After remaining in this situation from ten to fifteen minutes, he was, without being dried, immediately wrapped in a blanket, thoroughly heated before the fire, and thus removed to another bed, and covered over with the bed-clothes. The sensation produced by the wet sheet is first a sensation of great cold, accompanied with sighing; but this is almost immediately succeeded by an agreeable sensation of coolness and comfort. The sheet then begins to grow warm, and when the heat of the skin has been previously very great, the blanket reeks with steam. Shortly after the patient is removed to the warm bed, he begins to perspire, his headache and muscular pains cease, and he sinks into a calm and undisturbed sleep, from which he awakes, still perspiring, but painless, refreshed, and occasionally well.' * * * * *

After a few remarks, which do not bear upon the present subject, Mr. Stallard proceeds to relate ten cases, treated in the manner above described. Of these ten cases one died and the rest recovered, and some of them recovered with remarkable rapidity. In speaking generally of the cases, Mr. Stallard observes:—

'That the second case was one in which I hesitated to use the cold, fearing lest the internal organs, which were already seriously affected, should suffer by it; but the disease seemed so really serious, the skin was so remarkably harsh and dry, no perspiration having ever taken place since his admission, that I determined to try it. The effect was most gratifying; the perspiration seemed at once to unload the system, to restore the functions of the lungs and alimentary canal to something like order, and the stimulants ordered at the same time aided, I have no doubt, in bringing about this desirable, and to me unexpected result. The third case was equally successful, although the patient had been under the ordinary treatment five days without real benefit; he was at once relieved by the cold sheet. Of the following cases I shall only notice the eighth and tenth; the former being by far the most striking cure resulting from the cold water treatment; a single application, without any medicine, having restored the healthy condition of the body. The last case, although terminating fatally, does not furnish a single argument against the use of the wet sheet. The death was, no doubt, caused by sudden congestion of the lungs, which fever patients are especially prone to, and the tendency to which was augmented by the dose of morphine, administered over night to allay the excessive restlessness. The application of the cold itself was

followed by the best result, viz. free perspiration, which I am afraid was checked by the restlessness of the patient causing the bed clothes to be thrown off, and the body to be exposed.'

Such is Mr. Stallard's report, and it bears witness to the remarkable power of the wet sheet in subduing fever. It is true that Mr. Stallard's method was not the genuine hydropathic method, but a sort of compromise. Had he *strictly* followed the hydropathic plan, and had the wet sheet been applied at the onset of the febrile attack, it is more than probable that the death which he has recorded would not have occurred. It is erroneous to suppose that the object of the wet sheet packing is to excite perspiration. The object in view is, to cool the body, to diminish the rapidity of the circulation, to soothe and tranquillize the nervous system. In some cases perspiration ensues, but a patient may be delivered from fever without perspiring at all.

So much for the wet sheet packing in acute affections of the circulating system. Let us now consider the hydropathic remedies for acute affections of the nervous system. These will be best illustrated by the relation of a few cases of epileptic convulsions, recently treated by myself in this neighbourhood. I am in the habit of visiting, every Wednesday, a little village, ten miles from Birmingham, called Hockley Heath. At these visits I give gratuitous advice to the poor who attend in considerable numbers, and, in most cases, faithfully follow out my instructions. On the 28th of August, 1850, a little girl, thirteen years of age, named Thirza Nicolls, was brought by her mother from Shipston, where she resides, for the purpose of obtaining my advice. The child had a pale, emaciated, scrofulous appearance, and was affected with fits. Nine weeks previously it had its first fit, which could not be traced to any particular cause. The fits have been getting gradually worse and worse. I saw the child on the Wednesday; on the preceding Monday the fits had attacked her thrice; the first fit lasting one hour and five minutes, and the other two occupying each half an hour. On the previous Saturday she had lain an hour and a quarter in a fit, and on the Thursday preceding she had had a fit which lasted two hours. The fits come on in the following manner: Sometimes they are preceded by pain in

the brow, immediately over the eyes; at other times, without any warning, she becomes giddy, and falls insensible to the ground, and her insensibility continues from half an hour to two hours; her eyes are closed, and her countenance assumes a livid aspect. During the period of insensibility convulsions come on at intervals; she may lie perfectly quiet for ten minutes, and then begin to struggle, throwing her arms and feet about, grinding her teeth, foaming at the mouth, and perhaps screaming loudly. After a short time the convulsion subsides, and the little patient, although still insensible, regains tranquillity. A brief time elapses, and the paroxysm bursts out with renewed violence, but soon exhausts its fury as at first. The fit terminates by the usual critical evacuations, and the patient recovers smiling, and asks for water to drink. The patient sleeps well, but her appetite is bad, and she complains of griping pains in the abdomen. Such was the condition of the child when I saw her on the 23rd of June. I ordered her a single small dose of rhubarb and magnesia, and to take a wash down with appropriate exercise thrice a day. A fortnight after she returned to Shipston; she had not had a single fit during her stay at Hockley Heath. From a pale, feeble, spiritless, and emaciated being, she was rapidly growing into a rosy-faced, plump child, full of life and spirits.

Mary Shaw, fifteen years of age, residing at Rowney Green, between Alvechurch and Beoley, came to me July 31st, 1850, and stated her case thus: Thirteen months since she rode some distance backward, sitting on the back seat of a dog cart; she felt herself giddy, turned sick, and fell into a fit immediately upon alighting. Since that period she has been subject to fits, she had been treated by a physician in Birmingham, but without benefit. The fits commence with nausea, sleepiness, and snatching, in various parts of the body; she then falls insensible and is convulsed; she does not bite her tongue, but sometimes injures herself by falling in dangerous positions. On one occasion she fell from the top of a flight of stairs to the bottom. The fits endure sometimes for three or four hours. She has them every day, more or less, passing frequently out of one fit into another. The alimentary canal is torpid. She complains of pain in the temples. The pulse is 96; her appetite good; has been better these last three weeks. Upon this I

ordered her to eat brown bread instead of white; to take a wash down morning and afternoon, and a sitz of half an hour's duration at twelve o'clock. This treatment I prescribed July 31st, 1850. During the ensuing months of August and September I heard nothing of her; but on October 2nd she came to thank me for her cure. She stated that she had steadily pursued the plan recommended for a month, and had then discontinued it. She had only had one fit since she commenced the treatment, and that had occurred about three weeks before she saw me for the second time, and had lasted half an hour. She considered herself cured.

Anne Pinfield, fifteen years of age, living in the village of Tarworth, Warwickshire, asked my advice September 18th, 1850. Three months ago when she was in the hay field raking after the wagon, a storm came on, attended with thunder and lightning. She was exceedingly alarmed and fell immediately into a fit. From that period she has had one or more fits every day. I can collect from her statement, and the statements of those with her, but a confused account of her condition. The fits commence with swimming in the head, and a peculiar affection of vision. It seems to her that everything around is dark or very light. She then falls insensible and struggles a great deal. It takes two or three persons to hold her. During the convulsion she screams, or hoots, as she calls it; does not foam at the mouth, but would bite her tongue did not the bystanders take the precaution of inserting pieces of leather between the teeth. There is at this time a staring expression of the eyes, and the countenance is red and swollen. The fit does not terminate in sleep; but she comes to herself suddenly. I recommended this girl to take a wash down morning and afternoon. September 24th she saw me again; she had followed up the treatment and had only had two fits, lasting five minutes each, during the week. I recommended her to eat brown bread instead of white, and in addition to her wash downs, to have a pail of water poured over her head every day at noon. October 2nd.—Had a fit yesterday which lasted nearly an hour; has had no other fit since last report. I recommended a wet sheet packing for an hour, followed immediately by two pails of water over the person every day at noon, and a dripping sheet to be taken morning and afternoon.

Oct. 23.—Had one fit yesterday fortnight, being frightened while returning home in the dark, by a person who threw a stone at her from behind a hedge. Has had no other fit since October 2.—Strength and general health much improved. Hence this girl, who had for three months been attacked by a fit every day, upon submitting to hydropathic treatment for five weeks, had during that time only four fits, one of which was produced by an act of wanton mischief. Since Oct. 23, I have not seen her, probably because she is completely free from her malady.

I could relate other cases of the successful treatment of convulsion; but the foregoing will suffice to convince every candid mind of the efficacy of water in these frightful affections.

Let me now direct your attention to the subject of chronic disease. I have drawn up an analysis of the effect of hydropathic treatment upon the weight of the body in 149 persons treated by my father at Umberslade Hall. These 149 persons were all subjects of disease, organic or functional. The table exhibits the weight of each individual previously to the commencement of hydropathic treatment, the weight of each individual when he quitted the establishment, and the length of time during which he had been under treatment. It appears that the total gain in weight effected by 149 individuals under the hydropathic treatment is 51 stone!! and the mean gain in weight for each person is four pounds twelve ounces; while the mean duration of treatment is fourteen weeks. From these statistics the safety, nay, the extreme usefulness of hydropathy in chronic disease, is broadly manifest. Take 149 individuals, subjects of chronic disease; and although among these there may be persons whose weight is abnormally increased by their malady, yet upon the whole, these 149 persons will weigh less than 149 healthy individuals; for the general tendency of disease is to produce loss of flesh. I repeat, we may lay it down as an axiom, that 149 diseased persons drawn together accidentally, will, taken as a mass, weigh less than 149 persons in a state of health. Hence if any mode of treatment augments the weight of such a mass of diseased persons, especially when the increase is as decided as in the present instance, amounting to 51 stone, we may rest satisfied that, upon the whole, good has been effected. Exception may be taken at individual

cases: one may refuse to admit that the health of a certain person is improved merely because he has increased in bulk; but we may safely assume that the health of a society of 149 persons, taken generally, is improved when we find that that society's weight is 51 stone heavier than on a previous occasion, and this independently of any peculiar diet. The 149 cases tabulated are taken one after the other, in the very order in which they occur in the register of the establishment. No case is omitted from the group, and no cases are added; the only exception being three or four cases of obesity in which, in addition to the ordinary hydropathic treatment, the patients were placed upon extremely limited diet. It is evident that these few cases ought to be excluded, inasmuch as the reduction of weight experienced by these three or four patients was the result, not of hydropathic treatment, but of a diminished supply of food, and was purposely effected in that manner.

It is not to be supposed that I maintain increase and diminution of weight to be exact criteria of improvement or deterioration in health in single instances. Indeed, most of those cases in which the table exhibits loss of weight were examples of great and manifest alleviation of disease, or of complete cure. Besides, it frequently happens in the water cure that patients at first decline in weight, but after a time not only recover what they had lost, but gain considerably. Sometimes indeed, persons coming under the water cure begin to gain immediately, and steadily increase in weight until they have attained the healthy standard; but it also frequently happens that the weight fluctuates backward and forward considerably, before it manifests a decided increase. The following case illustrates these assertions: A young lady from a distant county, who was under my care at the Hydropathic Establishment, Wheeler's Road, Edgbaston, during the early part of her treatment was considerably reduced in flesh. Between May 3rd and May 24th, she lost nine pounds in weight; the next week she gained a pound. A fortnight after she had gained three pounds and a quarter in addition. The next week she lost a pound and a quarter; then she gained a pound and a half. The week after she lost a pound; next week she gained two pounds and a half; the week after she gained half a pound; after this she lost half a pound; and the following week three

quarters of a pound more ; subsequently she gained two pounds ; then two pounds more ; but the next week she lost half a pound ; and when she was weighed again, her weight remained the same. Thus, during the first three weeks and three days of treatment she lost nine pounds ; then her weight increased a little, and afterwards fluctuated up and down for a considerable time, when it began steadily to rise, and I entertain not the slightest doubt but that it would gradually have attained the normal standard, had she remained under my care. As it was, she had gained three pounds and a quarter during her stay in Birmingham. This young lady's case is so instructive that I proceed to relate it rather fully. She was nineteen years of age, and came from a northern county to put herself under my care at the Edgbaston Establishment, on the 3rd of May of the current year. Her height was five feet five and a half, and she weighed nine stone four. Her constitution was scrofulous, as indicated by the light hair, blue colour of the eyes, and deeply flushed countenance. She related to me the following tale : She had always been delicate, but suffered from no important illness till a little more than three years ago, when a gland in the neck swelled, gathered, was opened, and healed up ; but it gathered again in the spring, and was never permanently healed, and is now open, and presents an unhealthy aspect. A month after the original swelling of the gland, she ruptured a blood vessel, and during the same day and ensuing night, spat up as much as three pints of blood ; she took certain pills, and the bleeding ceased. During the following winter she spat blood frequently, but not more than a few mouthfuls at a time. The bleeding has not recurred since. During the three years' illness, marked principally by debility and great nervousness, which followed the bleeding, she has had slight cough in the winter, but has been free from cough in the summer, and has been affected the whole time with inflamed and ulcerating glands about the neck. Her present condition is as follows :—The neck and right cheek are disfigured by several indolent, scrofulous sores, and there is a painful swelling, of the size of a hen's egg, near the internal extremity of the right shoulder bone. She is affected with cough, but the cough is not severe when she sits quiet. It is however very troublesome at night, and is accompanied by scanty expectoration of

that particular kind which is almost characteristic of consumption. She has considerable difficulty of breathing, and is much troubled with palpitation of the heart. Her pulse is 120 in a minute. Examination of the chest by the stethoscope indicated the existence of an ulcer on the top of the left lung. She is affected in the afternoon by hectic fever, which comes on about one or two o'clock, when she has to retire to bed and lie down till nearly four. She then rises, washes, takes a little walk, returns to her tea, and feels better. She sleeps pretty well, but rises unrefreshed and weary. Her stomach is quite out of order. After a meal, and sometimes independently of eating, a considerable quantity of a cold watery fluid rises into the mouth. She suffers from abdominal torpor. She has, and has had, such a loathing of animal food, that she has not eaten a morsel of meat for two or three months. She turns sick at the sight of it. Her appetite is very poor, so that even of vegetable food she takes but little. She states also that she is exceedingly prone to fall at any hour of the day into a kind of reverie or waking dream. While in this state, into which she lapses suddenly, any friend who may happen to be with her is astonished to hear her commence, and keep up a kind of conversation, in which the replies, inaudible to other ears than her own, seem to proceed from some absent acquaintance, whom her feverish imagination has brought bodily before the mind's eye. To these hallucinations she has been long subject. However, the most remarkable feature in the case is the extreme debility, or I should say, prostration of strength, into which she has fallen. Feelings of despondency predominate; and these have been aggravated by the declaration of her medical attendant that he had done for her what man could do, and that her case was hopeless. Her languor is such that she passes nearly the whole day upon the sofa, and although her lodgings are situated scarcely three minutes' walk from the Institution, yet she is compelled to be taken thither in a bath chair. Such was the condition of this poor patient when she commenced hydropathic treatment. It is impossible for me here to give full details of the treatment and progress of the case. Suffice to say that at first she apparently got worse, grew more languid, more feeble, and lost her sleep. Her relatives upon this wrote to urge her return, fearing lest she should

became too weak to bear the journey, and die at a distance from home. Convinced, however, that these bad symptoms were due to the progress of a large suppurating tumor in the neck, which had began to show itself before she commenced the treatment; and that they would yield to the tonic influence of water the moment that the tumour should ripen and be opened, I strongly dissuaded my patient from this step, and she remained. My opinion was confirmed by the event. The tumor ripened, was opened, and from that time she began to improve.

July 2.—My report runs thus: Abdominal torpor removed. Her appetite is better than it has been for half a year. Twice or thrice she has walked two miles at a stretch, without much fatigue. Sleeps all night—cough gone—pain in left side gone, and her breathing is much better. But she still has palpitation.

July 5.—Yesterday walked three miles at a stretch, which she had not done since February.

July 12.—Walks three or four miles a day, sometimes as much as seven, but with much fatigue and swelling of feet and ankles—cheerfulness restored.

July 19.—Improving. It is remarkable, that instead of the uncertain dreamy sleep from which she awoke weary and unrefreshed a month ago, she now enjoys a deep sleep, from the moment of retiring to bed to the moment of rising in the morning. She sleeps sometimes twelve hours at a stretch, and wakes fresh and active.

August 16.—My patient walked five miles yesterday, and four miles the day before.

August 20.—My patient says that she never felt stronger in her life; is quite a new creature. Yesterday she walked eight miles; the day before yesterday she walked six miles, and six miles the day preceding.

August 23.—Walked ten miles yesterday, but not more than three miles at a stretch. She states that she feels better than ever she did in her life. Is quite recovered from her hallucinations, deserting the ideal world for the world of reality.

August 27.—Has walked daily, from four to six miles. Rises at six, goes to bed at half-past ten, sleeps the whole of the intermediate time, and an hour in the afternoon.

September 3.—Yesterday walked five miles at a stretch, seven miles in the course of the day, and was not too much fatigued. At this date she left the establishment.

To those who saw this patient when she arrived, and when she left the establishment, the change in her appearance was astonishing. She came to me a feeble creature, with one foot already in the grave. A walk of three minutes exhausted her strength. From the loathing for food which she felt, she ate so little that she was half starved. Her mind was no less affected; her spirits were most painfully depressed, and she spent nearly the whole day languidly reclining on a sofa, a prey to that peculiar delirium which I have before described. When she left me, her mind had regained its tone; she was constantly cheerful and animated; her visions had melted away. She was eating, drinking, and sleeping, in a manner to make up for the time she had formerly lost, and was in the habit of walking daily not less than four miles, and sometimes as much as ten. Her cough had not entirely disappeared, however, and she still suffered occasionally from palpitation, and the ulcer in the lung was not healed. But by an instrument invented by Mr. Hutchinson for that purpose, it was ascertained that, in breathing, her lungs had been so far strengthened, that she could inspire forty cubic inches of air more than when she commenced treatment.

The relation of the above case has diverted our attention from the subject which we were previously pursuing, viz. the effect of hydropathic treatment upon the weight of the body. Of 149 individuals, taking the mean duration of treatment as fourteen weeks, the total gain in weight was fifty-one stone, and the mean gain to each individual was, $4\frac{2}{3}$ lbs. Of the patients who gained in weight, some gained only a pound or two, while others gained half a stone, a stone, or nearly two stones. Those who gained to this extent, were such as remained a considerable length of time under treatment. Some patients lost in weight; and in most cases the reason of this was, the short period of time which they devoted to the cure; and this is proved by the fact that, of the patients who ultimately gained considerably in weight, many lost considerably at the commencement, as in the case of Miss R—— just related. To the considerable number of these persons who break off the

cure just at the moment when they ought to pursue it most energetically, it is due that the mean balance in favour of gain does not rise much higher than I have represented it to be.

It must not be objected, that the increase of weight observed in water patients, is due to the formation of fat; for, although it is certainly true, that the increased plumpness of face and limb, which is frequently observed, shows the increased development of fat; yet, at the same time, flaccid, wasted muscles become firm, full, and bulky, and pallid cheeks glow with the color of the rose; and no one can deny that fresh growth of muscle, and new-born blushes in the countenance, betoken an accession to the quantity of blood which circulates through the frame. Frequently, moreover, we see evidence of an increased supply of blood in persons whose countenances, sicklied by disease, can never more brighten into the ruddy hues which have departed. Such persons, while the scales tell of an increase in weight amounting, it may be, to ten or fifteen, or twenty pounds, manifest no external difference. Their cheeks may be hollow, their body and limbs as slender as ever; and, except for the disappearance of a certain jaded languid air which once characterized them, no person could decide that their condition was improved. Yet, ten or fifteen, or twenty pounds' increase in weight, is no trifle. It must tell somewhere. The fact is, in these cases there is an absolute augmentation of the volume of the blood; the internal organs have the benefit of the additional quantity of food digested; they grow bigger, and work more efficiently. Herein lies the grand secret of the water-cure. The frequent employment of cold bathing improves the appetite, and restores the digestion; a larger amount of food is swallowed, digested, converted into blood. The new and healthy blood, circulating through the frame, revives and strengthens it. Each languid and inefficient organ feels the influence of the vital current, which fortifying healthy structure, and repairing diseased structure, flows unceasingly its appointed round. What a contrast is here exhibited between the water-cure and some other systems. 'A full, plethoric woman,' says Dr. Farre, 'of a purple-red complexion, consulted me for hemorrhage, from the stomach depending on engorgement without organic disease. I gave her mercury, and in six weeks blanched her as white as a lily.'

We, however, certainly after a longer period than that required by Dr. Farre, *we* consider it an honour to bring *back* the roses to the faded cheek, and would certainly never dream of congratulating ourselves that we had melted down even a purple-red complexion into deathly pallor. 'The blood,' says Holy Writ, 'is the life;' and I think most persons will admit that it is a highly reprehensible practice, except in cases of indisputable necessity, either to draw it from the system, or to alter its constitution by the agency of mercury, or other mineral poisons.

It is a proven fact, that the majority of water patients increase in bulk, and that this increase of bulk is not due to the deposition of fat entirely, but in great part to an augmentation of the volume of the blood and of the solid constituents of the body. This is the fact, but how can that fact be accounted for? It is singular that, simultaneously with the practical discoveries of Priessnitz, the great German chemist Liebig was prosecuting certain scientific researches which throw great light upon the operations of the water cure. To Priessnitz we are indebted for the practice; to Liebig for the rationale of hydropathy. A person in an average state of health, submitted for a minute and a half to that process which we term taking the shallow bath, imparts to the water sufficient heat to raise a gallon of water 30° F.;—to raise a gallon of water from 60° F. to 90° F. Of course, this quantity of heat is abstracted from his body. But it is found that the patient, instead of being chilled by the loss of this amount of heat, is actually warmer when he gets out of the bath, than he was when he got in. Clearly, therefore, the loss of a certain quantity of heat, is followed by the development of a greater amount. Whence is this newly generated heat derived? Liebig has answered the question. The heat of the body is produced exactly in the same way as the heat of an ordinary fire; that is to say, animals are kept warm by a process of combustion, by the combustion of very minute particles of their own bodies, and this combustion takes place throughout the whole fabric. Hence, whatever abstracts heat from the body, is followed by increase of combustion; for the vital powers so regulate the animal fires, that they burn rapidly when the system requires heat, and languish when heat is not required. After a cold bath, therefore the fires burn

more quickly, and, of course, an increased consumption of fuel occurs. But this fuel, be it remembered, is furnished by the minute elements of the body itself, and increased quickness of burning necessitates increased consumption of fuel, and consequently wasting of the body. But the system contains a provision by which this evil is obviated. Increased consumption of the body indeed takes place, but it is repaired with equal rapidity. As fast as the body burns away, the consumed particles are replaced by fresh ones. The solids destroyed are instantly replaced from the blood which solidifies in the vacant spot. Thus the fluid blood becomes reduced in quantity; but since the processes above described are attended by the development of a sense of hunger and augmented digestive power, an increased quantity of food is swallowed, digested, converted into blood, and that so fast, that the blood increases instead of diminishing in volume, and is enabled to form new solids out of itself quicker than the old solids are burnt away, so that, on the whole, the body becomes bulkier and more powerful. Those who are familiar with the hydropathic method, can bear testimony to the keen appetite which it develops, and which I have just accounted for. Loss of heat is instantly compensated by the generation of a fresh supply. This fresh supply is dependent upon the combustion of certain particles of the body. In fact, the fire is supported by invisible fragments of nerve, muscle, brain, liver, and other constituents of the frame. But the mutilated nerve, muscle, brain, liver, &c. are immediately repaired from the blood, and the blood derives from the food, which is swallowed and digested in increased quantity, more than it has lost. This is not a fanciful theory invented to serve a purpose. It is an accepted scientific truth, inculcated in all works of physiology, and taught in all medical schools.

From what has been said, it appears that in all diseases where there is deficiency of blood, and diminished vital power, the hydropathic treatment is peculiarly valuable, but I would, in bringing this lecture to a conclusion, beg to state that I do not mean to imply that the utility of hydropathy is confined to these conditions, nor to cases similar to those which I had previously related, viz. to fever, convulsions, and consumption. I have only selected these cases, because they present

something striking and tangible, and are easily described in public. I could have advanced a multitude of cases, widely differing from the above, which have been successfully treated. I have now only to plead the novelty and comprehensiveness of the subject which has engaged our attention, in excuse for the very imperfect manner in which I have handled it, and to hope that some of my hearers may be induced to pay greater attention to hydropathy than they have previously believed it to merit.

APPENDIX.

CASES, ILLUSTRATING THE EFFECT OF HYDROPATHIC TREATMENT UPON THE WEIGHT OF THE BODY.

NAME.	LENGTH OF STAY.		WEIGHT BEFORE TREATMENT.			WEIGHT AFTER TREATMENT.			GAIN.			LOSS.		
	Wks.	Dys	St.	lbs.	oz.	St.	lbs.	oz.	St.	lbs.	oz.	St.	lbs.	z.
Mr. B.	3	0	10	4	0	10	6	0	0	2	0			
Mrs. W.	1	0	9	3	8	9	3	0				0	0	8
Maj. De W.	7	0	9	3	0	9	10	8	0	7	8			
Mr. L.	3	0	8	2	4	8	4	0	0	1	12			
Mr. M.	22	0	10	7	8	10	11	0	0	3	8			
Miss Y.	7	0	9	7	8	8	11	8				0	10	0
Miss De W.	1	0	6	12	0	7	0	0	0	2	0			
Miss P.	2	0	9	13	0	9	13	0						
Mr. J.	14	0	11	5	8	12	4	0	0	12	8			
Miss P.	3	0	7	8	0	7	8	0						
Miss E. P.	3	0	5	8	8	5	12	0	0	3	8			
Mr. G.	5	0	12	6	0	12	8	0	0	2	0			
Mr. E.	7	0	1	12	0	1	13	8	0	1	8			
Mrs. L. J.	2	0	10	2	0	9	13	0				0	3	0
Miss L. J.	2	0	2	0	0	2	1	8	0	1	8			
Mr. C.	1	0	9	12	0	9	8	0				0	4	0
Mrs. W.	1	0	6	8	8	6	10	8	0	2	0			
Mr. B.	1	0	9	6	8	9	9	0	0	2	8			
Mr. C.	17	0	12	3	0	13	4	0	1	1	0			
Mr. L.	54	0	9	3	0	9	2	8				0	0	8
Mr. T.	8	0	10	12	0	11	2	0	0	4	0			
Mr. E.	4	0	9	11	8	10	0	0	0	2	8			
Mr. J. M.	13	0	9	13	0	10	1	0	0	2	0			
Mr. W. M.	6	0	12	6	0	12	7	8	0	1	8			
Mr. G.	2	0	10	2	0	10	3	0	0	1	0			
Mrs. C.	6	0	13	5	8	13	1	0				0	4	8
Mr. B.	1	0	10	10	0	10	9	8				0	0	8
Mr. S.	3	0	8	7	0	8	9	0	0	2	0			
Capt. G.	2	0	11	12	8	11	6	0				0	6	8
Mr. C.	4	0	9	6	0	9	11	4	0	5	4			
Mr. McK.	19	0	11	11	0	11	7	0				0	4	0
Miss S.	9	0	9	1	0	8	13	2				0	1	14
Mr. H.	4	0	9	6	0	9	4	0				0	2	0
Mr. B.	11	0	8	9	0	8	12	0	0	3	0			
Mrs. O.	18	0	7	9	0	9	4	0	1	9	0			
Mrs. R.	6	0	8	10	8	8	8	8				0	2	0
Mr. C.	12	0	9	3	0	9	5	8	0	2	8			

NAMES.	LENGTH OF STAY.		WEIGHT BEFORE TREATMENT.			WEIGHT AFTER TREATMENT.			GAIN.			LOSS.		
	Wks.	Dys.	St.	lbs.	oz.	St.	lbs.	oz.	St.	lbs.	oz.	St.	lbs.	oz.
Mr. B.	10	0	9	10	0	10	3	8	0	7	8	.	.	.
Miss R.	9	0	7	10	0	7	10	0	.	.	.	.	.	.
Mr. L.	8	0	9	11	8	10	2	8	0	5	0	.	.	.
Mr. A. T.	7	0	12	4	0	12	6	0	0	2	0	.	.	.
Miss E.	9	0	8	9	0	8	5	8	.	.	.	0	3	8
Mr. C.	4	0	8	11	8	9	1	4	0	3	12	.	.	.
Mr. M.	2	0	7	11	0	7	13	8	0	2	8	.	.	.
Mr. C.	7	0	8	9	0	8	12	0	0	3	0	.	.	.
Mr. H.	7	0	9	5	8	9	5	8	.	.	.	.	.	.
Mr. M.	6	0	10	8	0	10	12	0	0	4	0	.	.	.
Mr. O.	13	0	12	13	0	12	9	8	.	.	.	0	3	8
Mr. E.	18	0	10	7	8	9	3	12	.	.	.	1	3	12
Mrs. E.	9	0	8	4	0	7	10	4	.	.	.	0	7	2
Miss E.	5	0	6	0	0	5	11	8	.	.	.	0	2	8
Mrs. L.	12	0	7	12	0	8	2	0	0	4	0	.	.	.
Miss L.	13	0	5	1	8	5	8	0	0	6	8	.	.	.
Mr. L.	7	0	9	7	12	9	8	0	0	0	4	.	.	.
Miss B.	21	0	7	11	0	8	2	12	0	5	12	.	.	.
Mr. P.	3	0	13	6	12	13	7	8	0	0	12	.	.	.
Miss L.	8	0	7	7	0	8	4	4	0	11	4	.	.	.
Mrs. W.	9	0	8	12	8	8	12	0	.	.	.	0	0	8
Mr. C.	11	0	9	4	8	9	10	12	0	6	4	.	.	.
Mr. S.	10	0	12	0	8	12	13	8	0	13	0	.	.	.
Mrs. N.	11	0	10	0	8	10	9	8	0	9	0	.	.	.
Mr. B.	2	0	10	1	8	10	2	0	0	0	8	.	.	.
Mrs. C.	7	0	7	6	0	7	8	12	0	2	12	.	.	.
Miss C.	14	0	8	2	0	8	7	0	0	5	0	.	.	.
Mr. A.	3	0	9	10	12	9	11	4	0	0	8	.	.	.
Miss B.	6	0	7	13	8	8	3	8	0	4	0	.	.	.
Mrs. P.	4	0	8	10	0	8	12	12	0	2	12	.	.	.
Mr. P.	11	0	8	2	0	9	4	2	1	2	2	.	.	.
Capt. E.	8	0	9	1	0	9	3	0	0	2	0	.	.	.
Mr. C.	4	0	10	8	0	10	2	4	.	.	.	0	5	0
Mr. M.	14	0	10	12	0	10	13	12	0	1	12	.	.	.
Miss F.	9	0	7	10	8	7	9	4	.	.	.	0	1	4
Major De W.	4	0	9	5	0	9	7	0	0	2	0	.	.	.
Mr. C.	8	0	8	7	8	9	1	8	0	8	0	.	.	.
Mrs. S.	10	0	9	7	0	8	10	8	.	.	.	0	10	8
Mr. C.	2	0	12	11	8	12	7	12	.	.	.	0	3	12
Miss B.	5	0	10	1	12	10	0	0	.	.	.	0	1	12
Mrs. L.	11	0	8	1	8	8	5	8	0	4	0	.	.	.
Mr. B.	4	0	10	3	0	10	6	4	0	3	4	.	.	.
Mr. S.	7	0	14	4	4	14	0	0	.	.	.	0	4	4
Rev. Mr. M.	12	0	9	12	8	10	4	0	0	5	8	.	.	.
Miss W.	23	0	7	11	8	8	1	0	0	3	8	.	.	.
Miss B.	31	0	6	10	8	7	5	8	0	9	0	.	.	.
Mrs. H.	10	0	7	2	12	7	0	0	.	.	.	0	2	12
Miss S.	7	0	8	9	0	9	4	12	0	9	12	.	.	.
Mr. S.	2	0	13	5	7	13	7	0	0	1	9	.	.	.
Mr. S.	5	0	10	4	8	10	12	12	0	8	4	.	.	.
Miss K.	4	0	8	3	0	8	8	12	0	5	12	.	.	.
Mr. J.	16	0	8	12	12	9	0	8	0	1	12	.	.	.
Mrs. J.	16	0	9	6	12	8	12	12	.	.	.	0	8	0

NAMES.	LENGTH OF STAY.		WEIGHT BEFORE TREATMENT.			WEIGHT AFTER TREATMENT.			GAIN.			LOSS.		
	Wks.	Dys.	St.	lbs.	oz.	St.	lbs.	oz.	St.	lbs.	oz.	St.	lbs.	oz.
Mrs. N. . .	8	0	8	12	4	9	1	12	0	3	8	.	.	.
Mr. W. . .	2	0	10	7	8	10	9	0	0	1	8	.	.	.
Miss G. . .	11	0	7	12	8	8	6	0	0	7	8	.	.	.
Mr. E. B. .	9	0	10	3	8	10	7	8	0	4	0	.	.	.
Ditto . .	19	0	10	8	8	10	8	4	.	.	.	0	0	4
Mr. B. . .	8	0	10	11	8	11	0	4	0	2	12	.	.	.
Mr. V. W. .	9	0	10	0	0	10	3	0	0	3	0	.	.	.
Mr. S. . .	5	0	9	5	8	9	10	4	0	4	12	.	.	.
Mr. G. . .	4	0	7	10	12	8	7	12	0	11	0	.	.	.
Mr. C. . .	6	0	9	5	12	9	12	4	0	6	8	.	.	.
Master F. O. .	12	0	4	6	8	4	9	8	0	3	0	.	.	.
Mr. B. . .	12	0	10	5	0	10	4	8	.	.	.	0	0	8
Mr. W. . .	18	0	8	12	4	8	12	12	0	0	8	.	.	.
Mrs. T. . .	11	0	7	10	4	7	10	12	0	0	8	.	.	.
Mrs. W. . .	9	0	8	9	0	8	8	0	.	.	.	0	1	0
Mr. T. . .	6	0	8	12	4	8	12	8	0	0	4	.	.	.
Mr. C. . .	6	0	9	5	4	9	11	12	0	6	8	.	.	.
Miss H. . .	21	0	10	11	12	12	0	4	1	2	8	.	.	.
Miss B. . .	11	0	7	5	4	7	13	4	0	8	0	.	.	.
Mr. H. . .	9	5	8	2	8	8	3	12	0	1	4	.	.	.
Miss B. . .	9	0	6	9	8	6	3	0	.	.	.	0	6	8
Dr. F. . .	1	0	8	4	12	8	7	4	0	2	8	.	.	.
Mr. R. . .	9	0	11	4	0	10	9	8	.	.	.	0	8	8
Mrs. B. . .	8	0	7	7	4	7	13	0	0	5	12	.	.	.
Dr. B. . .	8	5	10	3	8	10	8	8	0	5	0	.	.	.
Miss F. . .	11	0	3	13	8	4	6	12	0	7	4	.	.	.
Mr. E. . .	4	0	9	12	4	9	10	8	.	.	.	0	1	12
Miss S. . .	3	0	9	8	8	9	10	0	0	0	8	.	.	.
Mr. B. . .	2	0	10	0	8	10	0	8	.	.	.	.	.	.
Mr. J. . .	7	0	12	2	4	11	6	0	.	.	.	0	10	4
Mr. W. . .	4	0	9	5	8	9	6	12	0	1	4	.	.	.
Dr. C. . .	7	0	10	8	8	10	11	12	0	3	4	.	.	.
Mr. H. . .	14	1	9	11	12	10	10	12	0	13	0	.	.	.
Mrs. A. . .	4	0	9	1	12	9	3	12	0	2	0	.	.	.
Miss E. A. .	4	0	4	8	8	5	0	0	0	5	8	.	.	.
Miss C. A. .	2	0	8	10	4	8	12	8	0	2	4	.	.	.
Miss H. . .	9	2	8	11	4	9	0	0	0	2	12	.	.	.
Mr. L. . .	7	2	9	2	4	8	13	4	.	.	.	0	3	0
Miss W. . .	4	6	9	2	8	9	4	0	0	1	8	.	.	.
Mr. S. . .	16	2	8	12	0	9	3	4	0	5	4	.	.	.
Mr. G. . .	3	0	8	9	12	8	9	8	.	.	.	0	0	4
Mr. L. . .	2	0	8	4	12	8	5	0	0	0	4	.	.	.
Mrs. L. . .	2	0	8	0	0	7	13	12	.	.	.	0	0	4
Mr. D. . .	1	5	10	12	0	10	13	4	0	1	4	.	.	.
Mrs. L. . .	27	0	7	8	8	7	13	4	0	4	12	.	.	.
Mr. C. . .	1	0	9	6	4	9	5	0	.	.	.	0	1	4
Mr. J. . .	5	0	11	6	12	11	7	12	0	1	0	.	.	.
Mr. W. . .	11	0	10	10	0	11	2	12	0	6	12	.	.	.
Mrs. D. . .	15	0	8	1	0	8	13	4	0	12	4	.	.	.
Mr. C. . .	1	0	10	2	0	10	1	0	.	.	.	0	1	0
Mr. F. . .	12	0	8	8	0	9	2	0	0	8	0	.	.	.
Mr. C. . .	3	0	9	8	12	9	10	0	0	1	4	.	.	.
Mr. G. . .	6	0	9	2	12	9	6	0	0	3	4	.	.	.

NAMES.	LENGTH OF STAY.		WEIGHT BEFORE TREATMENT.			WEIGHT AFTER TREATMENT.			GAIN.			LOSS.		
	Wks.	Dys.	Sts.	lbs.	oz.	Sts.	lbs.	oz.	Sts.	lbs.	oz.	Sts.	lbs.	oz.
Mrs. A.	11	0	8	1	0	8	10	8	0	9	8	.	.	.
Mr. P.	12	0	8	5	8	8	11	8	0	6	0	.	.	.
Mr. B.	2	0	9	5	0	9	6	0	0	1	0	.	.	.
Mr. T.	19	0	7	9	4	8	9	8	1	0	4	.	.	.
Mr. H.	7	0	11	6	0	11	10	8	0	4	8	.	.	.
Mr. H.	27	0	9	0	12	10	1	4	1	0	8	.	.	.
Mr. C.	2	0	10	3	0	10	4	0	0	1	0	.	.	.
Mr. A.	8	0	8	3	4	9	4	0	1	0	12	.	.	.
Mr. B.	1	0	12	2	0	12	4	0	0	2	0	.	.	.
Mr. T.	1	0	10	0	4	9	13	8	.	.	.	0	0	12
Mr. S.	1	0	9	11	12	9	13	8	0	1	12	.	.	.
Mr. P.	7	0	10	4	8	10	1	12	.	.	.	0	2	12
Miss C.	29	0	8	1	8	8	4	0	0	2	8	.	.	.
Mr. G.	1	0	10	9	12	10	9	8	.	.	.	0	0	4
Miss Y.	4	0	2	13	4	2	13	8	0	0	4	.	.	.
Mrs. Y.	3	0	8	6	12	8	11	0	0	4	4	.	.	.
Miss F.	6	0	7	11	4	7	11	4	.	.	.	.	.	.
Mr. N.	5	0	11	13	4	12	1	4	0	2	0	.	.	.
Mr. P.	2	0	10	2	8	10	1	8	.	.	.	0	1	0
Capt. O.	2	0	11	13	0	11	8	0	.	.	.	0	5	0
Miss H.	3	2	6	1	0	6	4	12	0	3	12	.	.	.
Mr. M.	3	5	12	11	12	13	0	8	0	2	12	.	.	.
Miss F.	7	0	6	9	8	6	7	4	.	.	.	0	2	4
Mrs. F. T.	1	0	10	5	12	10	6	8	0	0	12	.	.	.
Miss M.	1	0	4	1	8	4	1	0	.	.	.	0	0	8
Capt. L.	15	0	8	8	8	8	6	8	.	.	.	0	2	0
Miss G.	6	0	10	4	0	9	13	0	.	.	.	0	5	0
Mr. N.	4	0	11	13	4	11	11	8	.	.	.	0	1	12
Mr. W.*	10	0	5	12	8	5	12	12	0	0	4	.	.	.
Miss M. A. H.	4	0	5	11	12	6	4	4	0	6	8	.	.	.
Mr. B.	5	5	7	12	8	8	1	0	0	2	8	.	.	.
Mrs. S.	9	0	8	8	8	8	0	0	.	.	.	0	8	8
Mrs. H.	23	0	8	8	8	8	10	0	0	1	8	.	.	.
Mr. C.	1	0	11	9	8	11	8	12	.	.	.	0	0	12
Miss W.	6	0	6	6	0	6	5	0	.	.	.	0	1	0
Mr. S.	6	0	10	2	0	10	7	0	0	5	0	.	.	.
Miss F.	12	0	7	0	0	7	1	4	0	1	4	.	.	.
Dr. B.	10	0	10	2	4	10	5	8	0	3	4	.	.	.
Mrs. B.	10	0	7	3	12	7	10	8	0	6	12	.	.	.
Dr. C.	6	0	11	1	0	10	11	4	.	.	.	0	3	2
Mr. N.	4	0	11	10	8	11	11	8	0	1	0	.	.	.
Mr. C.	7	0	9	9	12	9	11	12	0	2	0	.	.	.
Mr. T.	4	0	8	12	0	8	9	8	.	.	.	0	2	8
Miss K.	5	0	7	7	0	7	10	0	0	3	0	.	.	.
Mr. S.	4	0	11	4	0	11	2	12	.	.	.	0	1	4
Sir W. H.	3	0	14	4	12	14	5	0	0	0	4	.	.	.
Mr. W.	8	0	10	8	4	11	8	12	1	0	8	.	.	.
Mrs. H.	4	3	6	10	4	7	6	8	0	10	4	.	.	.
Mr. S.	6	0	8	6	0	8	11	8	0	5	8	.	.	.
Mrs. C.	7	0	7	11	0	7	8	8	.	.	.	0	2	8

* This gentleman continuing treatment after he left gained very greatly in weight.

NAMES.	LENGTH OF STAY.		WEIGHT BEFORE TREATMENT.			WEIGHT AFTER TREATMENT.			GAIN.			LOSS.		
	Wks.	Dys.	St.	lbs.	oz.	St.	lbs.	oz.	St.	lbs.	oz.	St.	lbs.	oz.
Miss B.	10	0	6	1	8	6	5	4	0	3	12	.	.	.
Miss F.	5	0	7	5	0	7	3	12	.	.	.	0	1	4
Miss H.	5	0	11	13	4	12	0	4	0	1	0	.	.	.
Mr. L.	4	0	9	12	4	9	13	0	0	0	12	.	.	.
Mrs. D.	7	0	6	7	12	6	5	0	.	.	.	0	2	12
Mrs. M.	1	0	11	10	12	11	10	8	.	.	.	0	0	4
Mr. L.	1	0	10	6	8	10	6	8	.	.	.	.	.	.
Mr. W.	3	0	11	12	4	11	5	4	.	.	.	0	7	0
Mrs. G.	3	0	9	9	8	9	6	12	.	.	.	0	2	12
Mr. E.	3	0	7	11	4	8	3	8	0	6	4	.	.	.
Sir W. H.	1	0	14	0	4	14	1	12	0	1	8	.	.	.
Mast. M.	18	0	5	10	12	6	5	8	0	8	12	.	.	.
Mr. A.	16	0	10	5	0	10	8	8	0	3	8	.	.	.
Mr. S. A.	5	0	9	12	0	10	2	0	0	4	0	.	.	.
Mr. C.	3	0	10	7	8	10	7	12	0	0	4	.	.	.
Mr. W.	1	0	9	5	8	9	5	12	0	0	4	.	.	.
Mrs. R.	10	0	9	13	0	10	3	0	0	4	0	.	.	.
Lady B.	18	0	8	2	0	8	9	12	0	7	12	.	.	.
Mrs. D.	2	0	8	7	12	8	12	4	0	4	8	.	.	.
Dr. M.	1	0	10	5	8	10	5	12	0	0	4	.	.	.
Mr. W.	15	0	10	2	4	11	0	0	0	11	12	.	.	.
Mr. D.	15	0	11	1	12	10	9	12	.	.	.	0	6	0
Mrs. N.	4	0	6	6	4	6	9	4	0	3	0	.	.	.
Mr. S.	12	0	11	0	12	12	5	4	1	4	8	.	.	.
Mr. A.	8	0	9	3	8	9	2	4	.	.	.	0	1	4
Mr. A.	1	0	15	0	4	15	0	4	.	.	.	.	.	.
Mrs. H.	5	0	6	9	12	6	11	4	0	1	8	.	.	.
Mr. H.	1	0	11	12	4	12	0	0	0	1	12	.	.	.
Mr. C.	6	0	13	0	12	13	6	0	0	5	4	.	.	.
Mr. M.	4	0	10	1	0	10	0	8	.	.	.	0	0	8
Mr. E.	6	0	8	10	12	9	8	12	0	12	0	.	.	.
Ditto	4	0	9	5	12	9	2	0	.	.	.	0	3	12
Mr. T.	8	0	8	11	4	8	7	4	0	4	0	.	.	.
Miss W.	11	0	9	3	8	9	4	4	0	0	12	.	.	.
Mrs. K.	11	0	7	12	4	8	11	4	0	13	0	.	.	.
Mrs. S.	7	0	6	12	0	7	3	4	0	5	4	.	.	.
Mr. F.	4	0	10	6	12	10	7	8	0	0	12	.	.	.
Mrs. J.	1	0	7	8	0	7	9	12	0	1	12	.	.	.
Mr. J.	1	0	11	11	8	11	12	12	0	1	4	.	.	.
Mrs. P.	45	6	9	13	4	11	0	0	1	0	12	.	.	.
Capt. W.	10	0	9	5	0	9	12	12	0	7	12	.	.	.
Mr. E.	3	0	9	2	4	9	10	0	0	7	12	.	.	.
Mr. H.	3	0	10	0	12	10	1	12	0	1	0	.	.	.
Mrs. R.	8	4	8	8	12	8	13	8	0	4	12	.	.	.
Mr. G.	3	0	9	1	8	9	5	4	0	3	12	.	.	.
Mr. D.	3	0	10	10	0	10	10	4	0	0	4	.	.	.
Mr. O'C.	2	0	12	0	8	12	1	8	0	1	0	.	.	.
Mr. M.	2	0	12	1	0	12	4	12	0	3	12	.	.	.
Mr. D.	4	0	9	11	4	10	1	12	0	4	8	.	.	.
Mrs. C.	1	0	9	7	12	9	10	4	0	2	8	.	.	.
Mr. K.	1	0	11	3	0	11	2	8	.	.	.	0	0	8
Mr. H.	1	0	10	3	8	10	5	12	0	2	4	.	.	.
Mr. C.	3	5	9	6	12	9	4	4	.	.	.	0	1	8

NAMES.	LENGTH OF STAY.		WEIGHT BEFORE TREATMENT.			WEIGHT AFTER TREATMENT.			GAIN.			LOSS.		
	Wks.	Dys.	St.	lbs.	oz.	St.	lbs.	oz.	St.	lbs.	oz.	St.	lbs.	oz.
Mrs. H.	2	0	8	9	4	8	8	12	.	.	.	0	0	8
Mr. M.	4	0	12	1	8	12	5	4	0	3	12	.	.	.
Capt. W.	5	0	9	3	0	9	10	8	0	7	8	.	.	.
Mr. D.	4	0	11	5	12	11	1	0	.	.	.	0	4	12
Mrs. H.	4	0	12	12	4	12	1	12	.	.	.	0	10	8
Miss H.	4	0	6	5	12	6	2	8	.	.	.	0	3	4
Master H.	4	0	3	4	4	2	13	6	.	.	.	0	4	14
Miss H.	2	0	6	9	4	6	6	10	.	.	.	0	2	10
Mrs. H.	11	0	8	12	4	8	7	10	.	.	.	0	4	10
Mr. G.	3	0	9	10	12	9	7	8	.	.	.	0	3	4
Miss H.	18	0	8	5	0	7	11	4	.	.	.	0	7	12
Mr. K.	1	0	14	0	0	13	12	6	.	.	.	0	1	10
Mrs. K.	1	0	8	2	14	8	3	6	0	0	8	.	.	.
Mrs. J. T.	10	5	5	12	2	5	11	4	.	.	.	0	0	14
Mr. J. T.	4	0	11	1	10	11	0	2	.	.	.	0	1	8
Miss T.	10	0	3	11	0	4	0	8	0	3	8	.	.	.
Miss G.	10	0	8	10	0	8	10	8	0	0	8	.	.	.
Mr. S.	1	0	10	9	8	10	9	8	.	.	.	.	.	.
Mr. H.	2	0	9	4	10	9	4	8	.	.	.	0	0	2
Mr. W.	2	0	10	3	4	10	7	12	0	4	8	.	.	.
Mrs. W.	13	0	8	10	0	8	12	0	0	2	0	.	.	.
Miss C.	7	1	10	9	6	10	8	12	.	.	.	0	0	10
Dr. T.	4	0	9	0	0	9	4	12	0	4	12	.	.	.
Mrs. H. T.	21	6	9	3	0	8	12	0	.	.	.	0	5	0
Mr. S.	1	0	8	10	4	8	9	14	.	.	.	0	0	6
Mrs. L.	6	0	12	4	8	12	2	10	.	.	.	0	1	14
Miss B.	6	0	9	6	4	9	3	2	.	.	.	0	3	2
Miss W.	4	0	7	10	10	7	10	2	.	.	.	0	0	8
Lady W.	4	0	13	10	4	13	7	4	.	.	.	0	3	0
Mr. E. P.	4	0	9	10	0	9	7	14	.	.	.	0	2	2
Master B.	3	0	5	11	4	6	0	4	0	3	0	.	.	.
Master K.	1	0	4	11	6	4	10	12	.	.	.	0	0	10
Miss C. S.	1	0	9	1	0	8	9	8	.	.	.	0	5	8
Miss E. W.	2	0	4	5	6	4	4	12	.	.	.	0	0	10
Mr. H. T.	4	0	12	8	12	12	10	8	0	1	12	.	.	.
Mrs. H. T's M.	3	0	9	1	4	9	1	14	0	0	10	.	.	.
Mr. R. G.	1	0	12	12	12	12	11	10	.	.	.	0	1	2
Mr. E.	3	0	11	2	12	11	0	12	.	.	.	0	2	0
Mr. McL.	4	0	10	8	0	10	2	4	.	.	.	0	5	12
Mr. B.	3	0	9	10	12	9	13	10	0	2	14	.	.	.
Gen. C.	2	0	11	2	8	10	12	14	.	.	.	0	3	10
Mr. B.	4	0	10	0	8	10	4	12	0	4	4	.	.	.
Mr. L.	5	0	10	9	12	10	11	8	0	1	12	.	.	.
Mr. F.	3	0	9	0	0	9	0	10	0	0	10	.	.	.
Mr. B.	5	2	10	12	0	10	13	12	0	1	12	.	.	.
Mr. J.	2	0	11	10	14	11	11	4	0	0	6	.	.	.
Mrs. J.	2	0	7	11	10	7	12	4	0	0	10	.	.	.
Mr. P.	2	0	11	10	12	11	13	8	0	2	12	.	.	.
Mr. B.	7	0	9	3	4	9	5	8	0	2	4	.	.	.
Mr. W.	4	0	9	10	8	9	9	4	.	.	.	0	1	4
Mrs. W.	7	0	8	10	12	8	11	10	0	0	14	.	.	.
Miss W.	7	0	8	0	8	8	2	12	0	2	4	.	.	.
Miss F. W.	7	0	6	10	8	6	13	8	0	3	0	.	.	.

NAME.	LENGTH OF STAY.		WEIGHT BEFORE TREATMENT.			WEIGHT AFTER TREATMENT.			GAIN.			LOSS.		
	Wks.	Dys	Sts.	lbs.	oz.	Sts.	lbs.	oz.	St.	lbs.	oz.	St.	lbs.	oz.
Mrs. W's. Md.	7	0	7	12	8	8	12	4	0	13	12	.	.	.
Capt. B.	11	0	11	5	8	10	11	12	0	7	12	.	.	.
Mr. T. .	2	0	10	11	14	10	10	6	.	.	.	0	1	8
Miss T. .	2	0	3	13	8	4	1	4	0	1	12	.	.	.
Miss D. .	3	0	8	13	2	9	0	8	0	1	6	.	.	.
Mrs. H. .	1	0	8	7	0	8	7	14	0	0	14	.	.	.
Miss H. D.	3	0	9	0	8	9	0	12	0	0	4	.	.	.
Miss E. D.	3	0	8	7	0	8	5	0	.	.	.	0	2	0
Mr. C. .	10	2	9	5	8	10	8	4	1	2	12	.	.	.
Miss Y. .	2	0	8	1	0	7	12	0	.	.	.	0	3	0
Mr. F. .	4	0	9	4	10	9	7	4	0	2	10	.	.	.
Miss D. .	5	0	8	11	0	8	11	0	.	.	.	.	.	.
Miss R. D.	7	0	4	13	12	5	8	10	0	8	14	.	.	.
Miss E. D.	7	0	7	4	2	6	11	2	.	.	.	0	7	0
Miss S. J.	17	0	6	5	4	7	8	8	1	3	4	.	.	.
Mr. G. .	9	0	8	8	12	9	9	4	1	0	8	.	.	.
Mr. M. .	12	0	10	0	0	10	5	12	0	5	12	.	.	.
Mr. B. .	4	0	9	8	0	9	4	8	.	.	.	0	3	8
Mr. C. .	10	0	11	5	12	11	9	4	0	3	8	.	.	.
Mr. J. .	8	0	11	10	8	11	8	8	.	.	.	0	2	0
Mrs. J. .	2	0	7	11	14	8	0	0	0	2	2	.	.	.
Ditto	2	0	8	1	0	8	1	8	0	0	8	.	.	.
Mr. A. .	5	0	11	10	8	11	2	12	.	.	.	0	7	12*
Mrs. D. .	14	0	9	0	8	9	3	8	0	3	0	.	.	.
Miss B. .	5	0	4	8	12	5	0	8	0	5	12	.	.	.
Mr. P. .	6	3	11	12	2	11	9	0	.	.	.	0	3	2
Mr. C. W.	1	0	10	1	8	10	2	12	0	1	4	.	.	.
Mr. B. .	4	0	8	1	4	8	9	2	0	7	14	.	.	.
Mrs. W. .	1	0	8	12	8	9	0	0	0	1	8	.	.	.
Mrs. H. .	9	0	7	8	8	8	4	8	0	10	0	.	.	.
Mr. W. .	2	0	10	4	8	10	2	10	.	.	.	0	1	14
Mrs. N. .	6	0	9	13	8	10	2	8	0	3	0	.	.	.
Mr. S. .	2	0	7	7	6	7	9	4	0	1	14	.	.	.
Mrs. M. .	3	0	10	3	0	10	1	0	.	.	.	0	2	0
Mrs. H. .	3	0	8	10	4	8	10	12	0	0	8	.	.	.
Mr. H. .	10	0	8	4	10	9	2	8	0	11	14	.	.	.
Mrs. H. .	1	0	8	11	8	8	12	8	0	1	0	.	.	.
Mr. P. .	8	0	9	2	4	10	2	8	1	0	4	.	.	.
No. 336 patients.	.	.	.	.	.	.	.	.	67	2	3	24	3	13
									24	3	13			
Balance in favour of Gain.									42	12	6			

* This gentleman, contrary to orders, took a great deal of severe exercise.

ANALYSIS.

PATIENTS WHO GAINED IN WEIGHT.

	Wk. Dy.	St.	lbs.	oz.		Wk. Dy.	St.	lbs.	oz.
Mrs. O.	18 0	1	9	0	Mr. C.	11 0	0	6	4
Mr. S.	12 0	1	4	8	Mr. E.	3 0	0	6	4
Miss S. J.	17 0	1	3	4	Mr. P.	12 0	0	6	0
Mr. C.	10 2	1	2	12	Miss B.	21 0	0	5	12
Miss H.	21 0	1	2	8	Miss K.	4 0	0	5	12
Mr. P.	11 0	1	2	2	Mrs. B.	8 0	0	5	12
Mr. C.	17 0	1	1	0	Mr. M.	12 0	0	5	12
Mr. A.	8 0	1	0	12	Miss B.	5 0	0	5	12
Mrs. P.	45 6	1	0	12	Rev. Mr. M.	12 0	0	5	8
Mr. H.	27 0	1	0	8	Miss E. A.	4 0	0	5	8
Mr. W.	8 0	1	0	8	Mr. S.	6 0	0	5	8
Mr. G.	9 0	1	0	8	Mr. C.	4 0	0	5	4
Mr. G.	19 0	1	0	4	Mr. S.	16 2	0	5	4
Mr. P.	8 0	1	0	4	Mr. C.	6 0	0	5	4
Mrs. W's. Md.	7 0	0	13	12	Mrs. S.	7 0	0	5	4
Mr. S.	10 0	0	13	0	Mr. L.	8 0	0	5	0
Mr. H.	14 1	0	13	0	Miss C.	14 0	0	5	0
Mrs. K.	11 0	0	13	0	Dr. B.	8 5	0	5	0
Mr. J.	14 0	0	12	8	Mr. S.	6 0	0	5	0
Mrs. D.	15 0	0	12	4	Dr. T.	4 0	0	4	12
Mr. E.	6 0	0	12	0	Mr. S.	5 0	0	4	12
Mr. A.	10 0	0	11	14	Mrs. R.	8 4	0	4	12
Mr. W.	15 0	0	11	12	Mrs. L.	27 0	0	4	12
Miss L.	8 0	0	11	4	Mr. H.	7 0	0	4	8
Mr. G.	4 0	0	11	0	Mrs. D.	2 0	0	4	8
Mrs. H.	4 3	0	10	4	Mr. D.	4 0	0	4	8
Mrs. H.	9 0	0	10	0	Mr. W.	2 0	0	4	8
Miss S.	7 0	0	9	12	Mrs. Y.	3 0	0	4	4
Mrs. A.	11 0	0	9	8	Mr. B.	4 0	0	4	4
Mrs. N.	11 0	0	9	0	Mr. T.	8 0	0	4	0
Miss B.	31 0	0	9	0	Mr. M.	6 0	0	4	0
Miss R. D.	7 0	0	8	14	Mrs. L.	12 0	0	4	0
Master M.	18 0	0	8	12	Miss B.	6 0	0	4	0
Mr. S.	5 0	0	8	4	Mrs. R.	10 0	0	4	0
Mr. C.	8 0	0	8	0	Mrs. L.	11 0	0	4	0
Mr. F.	12 0	0	8	0	Mr. E. B.	9 0	0	4	0
Miss B.	11 0	0	8	0	Mr. S. A.	5 0	0	4	0
Mr. B.	4 0	0	7	14	Mr. T.	8 0	0	4	0
Lady B.	18 0	0	7	12	Mr. C.	4 0	0	3	12
Capt. W.	10 0	0	7	12	Miss H.	3 2	0	3	12
Mr. E.	3 0	0	7	12	Miss B.	10 0	0	3	12
Capt. B.	11 0	0	7	12	Mr. G.	3 0	0	3	12
Major De W.	7 0	0	7	8	Mr. M.	2 0	0	3	12
Mr. B.	10 0	0	7	8	Mr. M.	4 0	0	3	12
Miss G.	11 0	0	7	8	Mr. M.	22 0	0	3	8
Capt. W.	5 0	0	7	8	Miss E. P.	3 0	0	3	8
Miss F.	11 0	0	7	4	Miss W.	23 0	0	3	8
Mr. W.	11 0	0	6	12	Mrs. N.	8 0	0	3	8
Mrs. B.	10 0	0	6	12	Mr. A.	16 0	0	3	8
Miss L.	13 0	0	6	8	Miss T.	10 0	0	3	8
Mr. C.	6 0	0	6	8	Mr. C.	10 0	0	3	8
Mr. C.	6 0	0	6	8	Mr. B.	4 0	0	3	4
Miss M. A. H.	4 0	0	6	8	Dr. C.	7 0	0	3	4

PATIENTS WHO GAINED IN WEIGHT—*continued.*

	Wk.	Dy.	Sts.	lbs.	oz.		Wk.	Dy.	Sts.	lbs.	oz.
Mr. G.	6	0	0	3	4	Mr. S.	2	0	0	1	9
Dr. B.	10	0	0	3	4	Mr. E.	7	0	0	1	8
Mr. B.	11	0	0	3	0	Miss L. J.	2	0	0	1	8
Mr. C.	7	0	0	3	0	Mr. W. M.	6	0	0	1	8
Mr. V. W.	9	0	0	3	0	Mr. W.	2	0	0	1	8
Master F. O.	12	0	0	3	0	Miss S.	3	0	0	1	8
Miss K.	5	0	0	3	0	Mr. W.	4	6	0	1	8
Mrs. N.	4	0	0	3	0	Mrs. H.	22	0	0	1	8
Master B.	3	0	0	3	0	Sir W. H.	1	0	0	1	8
Miss F. W.	7	0	0	3	0	Mrs. H.	5	0	0	1	8
Mrs. D.	14	0	0	3	0	Mrs. W.	1	0	0	1	8
Mrs. N.	6	0	0	3	0	Miss D.	3	0	0	1	6
Mr. B.	3	0	0	2	14	Mr. H.	9	5	0	1	4
Mrs. C.	7	0	0	2	12	Mr. W.	4	0	0	1	4
Mrs. P.	4	0	0	2	12	Mr. D.	1	5	0	1	4
Mr. B.	8	0	0	2	12	Mr. C.	3	0	0	1	4
Miss H.	9	2	0	2	12	Miss F.	12	0	0	1	4
Mr. M.	3	5	0	2	12	Mr. J.	1	0	0	1	4
Mr. P.	2	0	0	2	12	Mr. C. W.	1	0	0	1	4
Mr. H.	4	0	0	2	10	Mr. G.	2	0	0	1	0
Mr. B.	1	0	0	2	8	Mr. J.	5	0	0	1	0
Mr. E.	4	0	0	2	8	Mr. G.	2	0	0	1	0
Mr. C.	12	0	0	2	8	Mr. C.	2	0	0	1	0
Mr. M.	2	0	0	2	8	Mr. N.	4	0	0	1	0
Dr. F.	1	0	0	2	8	Miss H.	5	0	0	1	0
Miss C.	29	0	0	2	8	Mr. H.	3	0	0	1	0
Mr. B.	5	5	0	2	8	Mr. O. C.	2	0	0	1	0
Mrs. C.	1	0	0	2	8	Mrs. H.	1	0	0	1	0
Miss C. A.	2	0	0	2	4	Miss H.	1	0	0	0	14
Mrs. H.	1	0	0	2	4	Mrs. W.	7	0	0	0	14
Mr. B.	7	0	0	2	4	Mr. P.	3	0	0	0	12
Miss W.	7	0	0	2	4	Mrs. F. T.	1	0	0	0	12
Mrs. J.	2	0	0	2	2	Mr. L.	4	0	0	0	12
Mr. B.	3	0	0	2	0	Miss W.	11	0	0	0	12
Miss De W.	1	0	0	2	0	Mr. F.	4	0	0	0	12
Mr. G.	5	0	0	2	0	Mrs. H. T's. Md.	3	0	0	0	10
Mrs. W.	1	0	0	2	0	Mr. F.	3	0	0	0	10
Mr. J. M.	13	0	0	2	0	Mrs. J.	2	0	0	0	10
Mr. S.	3	0	0	2	0	Mr. A.	3	0	0	0	8
Mr. A. T.	7	0	0	2	0	Mr. W.	18	0	0	0	8
Capt. E.	8	0	0	2	0	Mrs. T.	11	0	0	0	8
Major De W.	4	0	0	2	0	Mrs. K.	1	0	0	0	8
Mrs. A.	4	0	0	2	0	Miss Y.	10	0	0	0	8
Mr. B.	1	0	0	2	0	Mrs. J.	2	0	0	0	8
Mr. M.	5	0	0	2	0	Mrs. H.	3	0	0	0	8
Mr. C.	7	0	0	2	0	Mr. J.	2	0	0	0	6
Mrs. W.	13	0	0	2	0	Mr. L.	7	0	0	0	4
Mr. S.	2	0	0	1	14	Mr. T.	6	0	0	0	4
Mr. L.	3	0	0	1	12	Mr. L.	2	0	0	0	4
Mr. M.	14	0	0	1	12	Miss Y.	4	0	0	0	4
Mr. J.	16	0	0	1	12	Mr. W.	10	0	0	0	4
Mr. S.	1	0	0	1	12	Sir W. H.	3	0	0	0	4
Mr. H.	1	0	0	1	12	Mr. C.	3	0	0	0	4
Mr. H. T.	4	0	0	1	12	Mr. W.	1	0	0	0	4
Mr. L.	5	0	0	1	12	Dr. M.	1	0	0	0	4
Mrs. J.	1	0	0	1	12	Mr. D.	3	0	0	0	4
Mr. B.	5	2	0	1	12	Miss H. D.	3	0	0	0	4
Miss T.	2	0	0	1	12						

PATIENTS WHO LOST IN WEIGHT.

	Wk. Dy.	Sta. lbs. oz.		Wk. Dy.	Sta. lbs. oz.
Mrs. S. . .	10 0	0 10 8	Mr. E. P. . .	4 0	0 2 2
Mrs. H. . .	4 0	0 10 8	Mr. H. . .	4 0	0 2 0
Mrs. J. . .	7 0	0 10 4	Mrs. R. . .	6 0	0 2 0
Miss Y. . .	7 0	0 10 0	Capt. L. . .	15 0	0 2 0
Mr. R. . .	9 0	0 8 8	Mr. E. . .	3 0	0 2 0
Mr. S. . .	9 0	0 8 8	Miss E. D. . .	3 0	0 2 0
Mrs. E. . .	9 0	0 7 12	Mr. J. . .	8 0	0 2 0
Miss H. . .	18 0	0 7 12	Mrs. M. . .	3 0	0 2 0
Mr. A. . .	5 0	0 7 12	Mrs. L. . .	6 0	0 1 14
Mr. W. . .	3 0	0 7 0	Mr. W. . .	2 0	0 1 14
Miss E. D. . .	7 0	0 7 0	Miss S. . .	9 0	0 1 14
Capt. G. . .	2 0	0 6 8	Miss B. . .	5 0	0 1 12
Miss B. . .	9 0	0 6 8	Mr. E. . .	4 0	0 1 12
Mr. D. . .	15 0	0 6 0	Mr. N. . .	4 0	0 1 12
Mr. C. . .	4 0	0 5 12	Mr. K. . .	1 0	0 1 10
Mr. Mc. L. . .	4 0	0 5 12	Mr. C. . .	3 5	0 1 8
Miss C. S. . .	1 0	0 5 8	Mr. J. T. . .	4 0	0 1 8
Capt. O. . .	2 2	0 5 0	Mr. T. . .	2 0	0 1 8
Miss G. . .	6 0	0 5 0	Miss F. . .	9 0	0 1 4
Miss H. T. . .	21 6	0 5 0	Mr. C. . .	1 0	0 1 4
Mast. H. . .	4 0	0 4 14	Mr. S. . .	4 0	0 1 4
Mr. D. . .	4 0	0 4 12	Miss F. . .	5 0	0 1 4
Mrs. H. . .	11 0	0 4 10	Mr. A. . .	8 0	0 1 4
Mrs. C. . .	6 0	0 4 8	Mr. W. . .	4 0	0 1 4
Mrs. S. . .	10 0	0 4 4	Mr. R. G. . .	1 0	0 1 2
Mr. C. . .	1 0	0 4 0	Mrs. W. . .	9 0	0 1 0
Mr. Mc. K. . .	19 0	0 4 0	Mr. C. . .	1 0	0 1 0
Mr. C. . .	2 0	0 3 12	Mr. P. . .	2 0	0 1 0
Dr. C. . .	6 0	0 3 12	Miss W. . .	6 0	0 1 0
Mr. E. . .	4 0	0 3 12	Mrs. J. T. . .	10 5	0 0 14
Gen. C. . .	2 0	0 3 10	Mr. T. . .	1 0	0 0 12
Miss E. . .	9 0	0 3 8	Mr. C. . .	1 0	0 0 12
Mr. O. . .	13 0	0 3 8	Miss C. . .	7 1	0 0 10
Mr. B. . .	4 0	0 3 8	Mast. K. . .	1 0	0 0 10
Miss H. . .	4 0	0 3 4	Miss E. W. . .	2 0	0 0 10
Mr. G. . .	3 0	0 3 4	Mr. L. . .	2 0	0 0 8
Miss B. . .	6 0	0 3 2	Mr. B. . .	1 0	0 0 8
Mr. P. . .	6 3	0 3 2	Mrs. W. . .	9 0	0 0 8
Mrs. L. J. . .	2 0	0 3 0	Mr B. . .	12 0	0 0 8
Mr. L. . .	7 2	0 3 0	Miss M. . .	1 0	0 0 8
Lady W. . .	4 0	0 3 0	Mr. M. . .	4 0	0 0 8
Miss W. . .	2 0	0 3 0	Mr. K. . .	1 0	0 0 8
Miss Y. . .	2 0	0 3 0	Mrs. H. . .	2 0	0 0 8
Mrs. H. . .	10 0	0 2 14	Miss W. . .	4 0	0 0 8
Mr. P. . .	7 0	0 2 12	Mr. S. . .	1 0	0 0 6
Mrs. D. . .	7 0	0 2 12	Mr. E. B. . .	19 0	0 0 4
Mrs. G. . .	3 0	0 2 12	Mr. G. . .	3 0	0 0 4
Miss H. . .	2 0	0 2 10	Mrs. L. . .	2 0	0 0 4
Miss E. . .	5 0	0 2 8	Mr. G. . .	1 0	0 0 4
Mr. T. . .	4 0	0 2 8	Mrs. M. . .	1 0	0 0 4
Mrs. C. . .	7 0	0 2 8	Mr. H. . .	2 0	0 0 2
Miss F. . .	7 0	0 2 4			

NO. OF PATI- ENTS.	•	GAINED BETWEEN.				NO. OF PATI- ENTS.	•	GAINED BETWEEN.			
		lbs.	oz.	lbs.	oz.			lbs.	oz.	lbs.	oz.
14	16 3	14	0	23	0	9	8 3	6	0	7	0
4	10 3	13	0	14	0	16	8 6	5	0	6	0
3	11 4	12	0	13	0	19	6 2	4	0	5	0
4	9 3	11	0	12	0	27	8 1	3	0	4	0
2	6 5	10	0	11	0	35	5 2	2	0	3	0
4	15 0	9	0	10	0	39	4 2	1	0	2	0
6	10 2	8	0	9	0	28	4 3			4	14
10	10 0	7	0	8	0						

NO. OF PATI- ENTS.	•	LOST BETWEEN.				NO. OF PATI- ENTS.	•	LOST BETWEEN.			
		lbs.	oz.	lbs.	oz.			lbs.	oz.	lbs.	oz.
4	7 0	10	0	11	0	7	7 4	4	0	5	0
2	9 0	8	0	9	0	16	4 5	3	0	4	0
5	8 2	7	0	8	0	17	5 4	2	0	3	0
3	8 4	6	0	7	0	21	4 2	1	0	2	0
6	6 3	5	0	6	0	22	3 0	0	0	0	14

* This column exhibits the average length of treatment undergone by each patient.

ERRATUM.

The loss of weight in the case of Mr. P. viz. 1 st. 3 lb. 12 oz. (referred to in p. 40) arose from *reduction of diet*, and not from the *treatment* adopted.

SUMMARY.

From a consideration of the preceding tables it appears that, of
336 patients,
233 gained in weight, and
103 lost weight during their residence in the establishment.

On an average of the whole 336, each patient gained 1 lb. 12 oz.

On an average of the 233 who gained, each patient gained 4 lb. 11 $\frac{2}{10}$ oz.

Of those who lost, each patient lost 3 lbs. 5 $\frac{2}{10}$ oz.

It will be perceived that the conclusions herein announced do not accord with the figures given in the Lecture, which were derived from an analysis made hurriedly, and it has since been discovered erroneously, of 149 cases only. More extended statistics show that the average amount of gain was overstated. However, the arguments employed in the Lecture, still apply, as the candid reader who compares the statement in the Lecture with the statement in this Appendix, will readily acknowledge.

The object desired in presenting to the public the preceding Statistics of the Hydropathic Establishment at Umberslade is, first to lay before all persons of intelligence certain safe and practical data, which may assist them in forming a judgment upon the actual tendency of the Water-cure. These tables will contribute to disabuse the public mind concerning the *dangers* of the hydropathic method, when directed by an experienced and educated physician.

They also prove that water-patients are by no means the starveling race which Prejudice and Ridicule depict. In fact, we know that were the quarrel between Allopathy and Hydropathy to be decided by the scales, the short-comings of the elder sister would be apparent in a moment.

Again, the tables fully bear out the theory concerning the action of the water-cure advanced by Liebig. They prove that the first action of cold applications is, to melt down or waste away the human body; they prove that the secondary effect is, to augment its bulk. In many

instances these two actions are carried on simultaneously, so that the wasting is not apparent; but from the moment of commencing hydropathic treatment, the patient increases in bulk; in other cases, these actions occupy distinct periods. For a certain number of days or weeks the patient more or less rapidly decreases in weight. At the expiration of this period, the secondary action sets in. The patient experiences an unwonted sense of hunger, eats abundantly, and increases very rapidly in weight. A short time since I had a patient who lost in a fortnight 7 lbs; but at the expiration of that time his appetite, which had previously been very indifferent, became suddenly marvellous. He ate in proportion, and quickly regained the weight he had lost. On consulting the table which contains the particulars of those patients who lost weight while residing at Umberslade, it will be clear, that the majority left the establishment while yet under the influence of the primary effect of the treatment. Had they remained a longer period, the secondary or reparative action would have regained its ascendancy, and the patient would have increased in blood, and nerve, and fat, and muscle. It must be mentioned, however, that many of those who left our establishment in the first stage of cure, continued the treatment (modified) at home, and there passed into the second stage. Some whose weight was above the healthy standard were purposely reduced. Loss of weight was also in a few cases induced for certain specific objects, which cannot here be discussed.

Patients under hydropathic treatment exhibit the following results as regards weight:—

1. They steadily increase from the moment of taking the first cold bath, until they have reached a maximum weight. (This is a very numerous class.)
2. They steadily decrease until they have reached a minimum weight. (This is a very rare class. Under judicious management, this event will never happen.)
3. They steadily decrease in weight for a certain period (Meiosomatic period), and then steadily increase (Pleiosomatic period). (This is also a numerous class.)
4. They vary in weight for a certain period, now weighing more now weighing less (Oscillatory period), and then begin steadily to increase to a maximum weight. (This is a numerous class.)
5. They vary in weight for a certain period (Oscillatory period), and then steadily decline to a minimum weight. (This even happens but rarely. It betokens sinking powers in the patient; and may always be avoided by an experienced practitioner.)

6. The weight remains stationary. There are some patients upon whom the water-cure seems to make no impression. Hardly any amount of treatment will disturb the equilibrium of their nutritive actions. In these cases, rather than push the hydropathic treatment to an extreme, it is better to call in the aid of other remedial measures.

The above considerations, therefore, enable us to state, as an established fact, that the hydropathic treatment causes the removal of a large portion of the solids and fluids of the body, which are, however, abundantly replaced by new solids and new fluids, either immediately or after a longer or shorter space of time. Now, in cases where either the solids or fluids of the bodies are diseased, who will not admit the advantage of exchanging these diseased tissues for new and healthy structure?

The statistics and foregoing reflections evidence very clearly the accordance of hydropathy with the great principle of Hahnemann. A drug or medical treatment which, in its primary action, produces artificially a certain diseased state, is employed to cure that same diseased state when it has arisen spontaneously. Thus opium produces constipation of the bowels, but opium is also employed by homoeopaths to remedy constipation of the bowels. Arsenic produces an eruption on the skin, but arsenic cures an eruption on the skin. Rhubarb has a purgative effect, but it is given to check excessive action of the bowels. We have also seen that the primary effect of the water-treatment is to *diminish* the weight of the body, yet we administer it to *augment* the weight of the body. Its primary effect is destructive, its secondary effect is constructive. It is an emaciating treatment, yet science and experience are acquainted with no method so efficacious in augmenting the size and weight of an emaciated patient.

FINIS.