

# MEDICAL ELECTRICITY

*WHAT IS IT? AND*

*HOW DOES IT CURE?*

BY

E. S. D'ODIARDI

MEDICAL ELECTRICIAN

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EX VOTO AUCTORIS

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I GRATEFULLY DEDICATE THESE RECORDS OF MY WORK TO  
THE KIND MEDICAL FRIENDS AND TO THE DEVOTED NURSES  
WITHOUT WHOSE CO-OPERATION MY EFFORTS WOULD BE UN-  
FRUITFUL.

95104



## ERRATA.

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Page 26, last line, for "Rassey" read "Passey."

.. 31, line 7, for "impudence" read "imprudence."

.. 41, .. 13, .. "as" read "or."

.. 59, .. 9, .. "of" .. "with."



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## INTRODUCTION.\*

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ANY art pretending to produce an action on the human body must be based on the observation and record of positive facts, and not on theories. When a fact is once ascertained, it must be accepted, whether or not it clashes with any hitherto recognised theory. All theories may, and no doubt will, be successively replaced by new theories, and are themselves a flagrant contradiction of all preceding beliefs. The orthodoxy of the day is the heresy of the eve. Faggots and burning stakes are the first reward of discoverers ; incense is only burnt on their

\* This is the introduction to the *Electro-Materia Medica* now in preparation.

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tombs. Persecution is the usual harbinger of recognition.

As an instance of the instability of theories, what remains of the theory of attraction as Newton understood it? The facts alone remain, but must be explained differently. The present probability on the subject of attraction is that it is the result of polarisation caused by the chemical action of the sea on its various beds, its exchanges of electricity with continents at every promontory or cape, and also with the tops of all the water-sheds, through the rivers which connect every ocean with the highest peaks so as to continually exhaust the tellurian differences of potential (which would otherwise reach an abnormal tension), the electrification by influence due to the atmosphere (the clouds and the winds being attracted towards areas of different potentials), together with the fact that only one side of planets is illuminated and heated, the other side being in com-

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parative darkness, thus creating a difference of potential, shifting as the planet revolves:—such seems, *for the present*, the only plausible explanation of the phenomena observed under the name of “attraction.” We must now admit that not only is a pound weight not the same in a scale at the equator and in high altitudes, but we may even begin to suspect that it is not exactly the same *at the same spot* when the magnetic potential (whichever it is) becomes different. This will surprise many readers, but is likely to become orthodox very soon, until it is replaced by some other discovery nearer to the primordial cause—never to be reached in this world!

We can only regard “theory” as we do the time of a chronometer—the nearest approximation to the truth yet known:—*not* the truth itself.

I have been guided by facts only in the whole of my work. My explanations may be replaced hereafter by others, but I am confident that the whole of

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the facts on which they are based will remain. A little vanity, perhaps, has induced me to venture upon explanations; *Meâ culpâ!* The fact is, I do not wish to be considered an ignorant empiric; so that, as a conscientious man, I have begun this book by stating facts, and relegated my explanations to the background. I shall expect, however, (as I have already said,) to see them replaced sooner or later by more perfect suggestions, and shall be glad of any correction. Still, not one of the facts in my electro-medical practice is likely to be contradicted. What I do now to raise or lower the temperature of the body, to increase or decrease the arterial pressure, or the quantity or frequency of the pulse, the breathing rate and its intensity, will, whenever employed, always produce the same effects with the same absolute certainty, whatever theory may then be suggested to explain the facts, long after my name has been forgotten. My mode of producing

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natural sleep, or of permanently stimulating nervous power, or restoring nutrition, appetite, digestion, assimilation, will still be found efficient, with or without theories. What more is needed by the sick? Nothing. The scientist, the investigator may dissect, comment on, and discuss these facts, but they will remain unshaken in their integrity.

By making the patient's pulse fast or slow, by reducing or increasing it in quantity, by restoring his nervous strength and brain power, his impaired intellects, his sleep, his digestive powers, (renal and abdominal activity, nutrition and perfect assimilation following as a matter of course,) my system of electro medical therapeutics can effectuate all that could be wished for by a sick person. I do not employ electricity *alone*; and in the present state of science, one cannot well foresee the possibility of depending *exclusively* on electricity, without associating it, as I do, with certain gases and fluids for

internal and external use. I have thus been enabled to shape a *materia medica* of electro-medical equivalents, producing all the effects required by the medical man, with which the human machinery may be regulated like clock-work.

As I leave nothing for the patient to do, many of the causes of disappointment and error due to the folly or neglect of patients in disregarding their doctor's prescriptions are satisfactorily eliminated.

E. S. D'ODIARDI

43 CORNWALL GARDENS,

*May*, 1893.

# NOTES OF CASES.

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## THE CASE OF MRS. —

Case No. 1.—*Hopeless case of Abdominal Disease of  
16 years' standing.*

For 16 years Mrs. --- had been subject to an irregularity lasting six months, accompanied by considerable abdominal swelling and repeated daily attacks of diarrhœa, causing extreme exhaustion. The irregularities began about May. When the functions began again, (about October,) the diarrhœa was followed by constipation so severe that during those 16 years relief was not once obtained

between October and May without the help of powerful opening medicines.

Mrs. ——'s position allowed her to secure the attendance of the best physicians and specialists in London. No efforts were spared, but she grew worse every year. The irritation of the lining membranes of the digestive organs brought on internal ulcerations, and subsequently, a sinus necessitating two operations, in spite of which the sinus remained unabated, disqualifying her for all the duties and pleasures of life. She applied to me in October, 1891, and was under treatment for a whole year, each morbid phenomenon having to be subdued and cured at the time of its appearance until the whole cycle of distressing symptoms was exhausted.

From the very first she stopped all other treatment, and entirely gave up the use of opening medicines. Daily functions were at once restored. The arterial tension was brought to the normal state by electro-pneumatic treatment as the breathing powers became developed. No opening medicines being used, all irritation subsided as a matter of course, and the



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ulcerations and sinuses were gradually healed. The greenish purple area surrounding the issue of the sinus, caused by the corrosive action of acrid matter, was replaced by perfectly healthy tissues of normal appearance. Complete regularity was re-established; no diarrhoea and no abnormal swelling have again appeared. Mrs. —— is now, after 18 months, *in perfect health and completely cured*. She can eat any food and digest it easily. Her case has been watched with great interest by several physicians, and the closest inspection shows no trace of previous disorder. She declares she was never so well before in her life.

N.B.—This patient has allowed me to refer to her any doctor wishing to investigate her case. Many doctors have already done so.

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Case No. 2.—*Dysentery of 17 years' standing.*

Patient had long served as a soldier in India. Is about 37 years of age ; a man of education and good birth, but whose prospects were blighted by intemperate habits. He enlisted. The same dissipated habits proved fatal to him in India, where he fell a victim to those diseases which attack Europeans and leave behind them the germs of severe chronic ailments. He was employed by the Bible and Tract Society in London. Having undergone my electric and pneumatic treatment *intus et extra* for 3 months, he was cured of his long-standing dysentery. His own very full and interesting account of his case may be seen amongst the original records of the hospital.

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Case No. 3.—*Bright's Disease.*

Age of patient about 30. Illness attributable to grief. Amount of albumen 15 per cent. ; great spinal fatigue and distress produced by standing for any length of time ; abundance of casts, emaciation and considerable loss of flesh every month, great irascibility, brainwork producing considerable fatigue ; hallucinations at night. After 6 months' treatment the morbid symptoms disappeared, hardly a trace of albumen was left, the density of the water had become normal, and no more casts can be detected with the microscope. The patient undertook an Alpine tour on foot, and ascended several mountains without feeling any unusual fatigue after average walks of 20 miles a day. Cured. Treated with the deep-plunge magneto-electrodes and centripetal currents in the spine.

N.B.—This patient has, since recovery, had a very severe attack of scarlet fever ; but, contrary to all expectations, no renal complications have occurred. Convalescence was rapid, and he now enjoys perfect

health. He could not have been expected to escape in that way before he had treatment.

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Case No. 4.—*Hip Disease and loss of Synovia in Knee.*

N—, age 13, for a long time treated unsuccessfully at a special London Hospital. She could not attend school, and was lame. After 4 months' treatment recovery was complete. Instruments employed for the treatment: the abscess-healer and the magneto-voltaic electrode for deep penetration. All lameness has disappeared. The patient has resumed attendance at school and can bear any amount of fatigue. A florid complexion has replaced the morbid paleness of her face. One cannot possibly see a more healthy subject. Case dismissed, cured.

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Case No. 5.—*Knee-cap Displaced by the fall of a trunk.*

F—, a railway porter at Paddington Station, was treated at our hospital in 1891. He met with a

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severe accident at the station through the fall of a trunk, and, though he had been for a considerable period under skilled medical treatment, was unable in May to resume his work. At that time he was engaged to be married. He was then sent to our hospital, and thought of breaking off his engagement as there seemed to be no probability that he would ever be able to keep a wife and family. But he was told at the hospital to do no such thing, and that he would very likely be cured about the month of September, that is to say, after 3 months treatment. And so he was. He was married in September and resumed his employment at Paddington Station two weeks afterwards. He is still there, and enjoys perfect health, never failing to evince his gratitude by telling his own story whenever occasion offers.

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Case No. 6.—*Dyspepsia.*

Mrs. —— had not for the last 15 years been able to digest her food without the help of violent aperients and drastics. She came as a private patient in a shattered state of health. She was cured by 4 months of daily treatment at the Professor's residence, where she was treated with the electro-inhalation, the pneumodynamometer and the system of wave interference for the restoration of the peristaltic motion. From the first day of treatment she ceased to take any aperients. The daily functions were at once restored and generally took place after each sitting. This lady afterwards brought her daughter, aged 14 years, who suffered from continual and severe 'losses.' They stopped from the very beginning of the treatment, which lasted 2 months, and the young lady has enjoyed perfect health ever since.

Mrs. —— still attends occasionally as a precaution-

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ary measure, on account of the length of time her illness had lasted, and the comparative shortness of her treatment.

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Case No. 7.—*Hemiplegia.*

Mrs. —, the wife of a London solicitor. Her face was distorted; the mouth on one side, and the left arm and leg partially paralysed. Speech indistinct. The patient was irascible, sometimes even violent. After a few weeks' treatment she was completely restored to health. The atrophied limbs were restored to their normal size; the features regained their usual aspect, the paralysed arm and leg became as strong as before. Cured.

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Case No. 8.—*Hemiplegia.*

Mrs. ———, wife of an officer, 28 years of age. Lesion in right optic thalamus. The accident occurred two years before she applied to me. The mouth was nearly straight. But the patient was in a low state of nervous depression and could not walk from one seat to another in the same room. She is now in the country, and writes: "I am in very good health and take very long walks every day." She is now able to read and write without fatigue, and does not lie down in the day as she was generally compelled to do. The treatment has been interrupted owing to her departure from London, and the use of the left arm has not yet been restored. The paralysed limbs were atrophied and withered. They are now a little larger and firmer than the sound ones. Health, vivacity and gaiety have been restored. Case not dismissed yet:

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Case No. 9.—*Hernia; Contusions; Consumption.*

R——, a child of about 12 years of age, was becoming consumptive, and came to the hospital after having been unsuccessfully treated elsewhere for hernia and severe contusions caused by a carriage wheel passing over her hip and groin. She was treated also for consumption. Cured by my lung-healer, pneumodynamometer, and the deep-plunge electrode, combined with the healing-cup. Case dismissed after 6 months, cured.

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Case No. 10.—*Menorrhagia.*

Mrs. —— was brought in a carriage to the professor's private residence. She had suffered for the last 4 years from excessive flooding. She had

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reached the very last stage of debility, and was unable to walk. After the second day's treatment the flooding stopped—and 3 days afterwards she walked to my house in Cornwall Gardens, distant more than a mile from her home. She had been considered a hopeless case by specialists. In 4 months she was restored to florid health, and has had no relapse since, that is to say for more than 18 months. Case dismissed, cured.

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Case No. 11.—*Abdominal Tumours.*

Miss ——— had two abdominal tumours. She had rejected all solid food for the previous 2 years, and lived on slops, a tea-spoonful at a time. Her face and lips were emaciated and entirely discoloured. No function took place normally. She could hardly speak, stand, or move. Death was the only relief

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she expected. Cured in a few months with the deep-plunge electrodes and interference waves, the lung-healer and pneumodynamometer. She is now in perfect health, and possesses all the activity of her best days. She is about 23 years of age, and came for treatment with the greatest reluctance, as she believed nothing could be done for her. It was she who sent Mrs. ——'s case of 15 years' standing, (No. 6,) already described.

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Case No. 12.—*Neurasthenia.*

Mrs. —— suffered from the consequences of a severe attack of influenza. The lungs and heart were implicated, and a wasting disease was imminent. Cured in about 3 months. Is now enjoying good health. Activity restored, and habitual cheerfulness has reappeared. Case not yet dismissed, though practically cured. Will attend occasionally for some time.

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Case No. 13.—*Neurasthenia and Loss of Voice.*

Mr. —, a clergyman of a London parish, expected to have to leave town and take to country work. Restored to health by my respiratory and spinal sittings, and also by phonetic exercises. The voice has become remarkably strong, and Mr. — can now undertake the most fatiguing duties in his parish

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Case No. 14.—*Varix.*

Miss — had a dilated vein on her nose, which disfigured it. It was shrunk to its natural size in three sittings, and did not reappear. This was two years ago.

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Case No. 15.—*Cancer.*

A German nurse had been treated for cancer at the Cancer Hospital. An operation was proposed, but she refused to allow it. When she applied for treatment at our hospital, her right arm was atrophied, her right hand rigid, her fingers contracted and absolutely useless. There was a considerable cancerous growth on the left side of the neck. The right hand is now as active and strong as the other; she can use it pretty freely. The cancerous growth has been considerably reduced. The case is going on at the hospital, where the patient may be seen by any visitor. Her general health has also been restored in the meantime.

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Case No. 16.—*Insomnia.*

A well-known gentleman, one of the highest officials of Scotland Yard (retired), was cured of insomnia in about two weeks. He had suffered for years.

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Case No. 17.—*Rheumatic Paralysis of 26 years' standing (well known to the Charity Organisation Society).*

Mr. —, disabled at the age of 19, is now about 47 years of age. He suffers from rheumatic paralysis and muscular atrophy, brought on chiefly by rheumatism and arthritis. He walks with two sticks. His body was bent like a carpenter's square when he first came. He has been about 6 months under treatment. He can now walk nearly erect. The instruments used for his cure were the electrodes of penetration and direction, the high-tension inhaling cabinet, centripetal currents administered with

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special electrodes for subcutaneous treatment by osmosis with various alkalines, spinal treatment, and of the ophthalmic, optic, hypoglossal nerves with the liquid-injector, also of the third and fourth vertebræ, and stimulation of a branch of the pneumo-gastric nerve, which is the depressor of circulation. By acting on a certain part of the transit of that nerve, the circulation is increased, because the controlling power of the nerve is diminished. The effect depends on the current employed. The patient's powers of locomotion are considerably improved, and he can walk from his house to the hospital in all weathers. His general health is already restored, and he is strong enough to carry heavy loads up and down stairs. The case is not dismissed yet, though he has been about 6 months under treatment. It is expected that a few months more will complete the cure, and relieve the Charity Organisation Society from a life burden. The patient has lived on public charity for many years, and has done no work whatever for the last 7 or 8 years.

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Case No. 18.—*Loss of Memory and Cerebral Exhaustion after a severe attack of Influenza.*

Mr. Lascari, about 26 years of age, came from Bombay three years ago to study law and qualify himself for the Bar. He passed all his examinations but the last, which was to take place in October, 1892. He had a very severe attack of influenza in the beginning of the year, which compelled him to postpone his final examination. When convalescent, he found that he had entirely forgotten all he had learnt, and was unable to follow any of the lectures, or retain what he read. There was also loss of appetite and insomnia. Mr. Lascari underwent cerebral and spinal treatment for 6 weeks, after which his memory and brain powers generally were restored. He had, before being cured, prepared a petition to lay before the benchers of the Middle Temple in the event of his failing, as his was a very hard case. But he passed successfully, and hence the petition was not presented. His own account of his case, which is



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on record, is full and interesting. The principal instruments employed were the liquid injector, the aural electrode with spark regulator, together with static bipolar treatment; also the combined electrodes of deep penetration and direction for treatment of the kidneys, spleen and pancreas, liver and abdomen. Case dismissed, cured.

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Case No. 19.—*Idiocy.*

A boy of 12 years of age was brought to the hospital a few months ago. He lives with his mother in some mews in Earl's Court Road, very unhealthy surroundings for a thoroughly scrofulous boy. The child had running abscesses in both ears. He had never been able to know the names of his sisters or any other members of the family. He could render no assistance whatever even in the simplest and easiest household duties. He was very irascible and difficult of management. The mother's illness has often prevented her from bringing her boy to the

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hospital, so that the treatment has not been regular. Notwithstanding such unfavourable conditions, the boy has now so far improved that the abscesses have been healed, and he can busy himself all day with small household duties, and shows in doing so perfect discernment. He never spoke before; he is now learning to speak. He also distinguishes between the members of the family and their names, and is beginning to understand his letters, and retains the names of tradesmen. The treatment employed is very much the same as that described in the last case (No. 18), with the addition of special treatment for scrofula. Case not dismissed; will last a long time.

THE MOTHER'S OWN REPORT.—“Before he began treatment he knew nothing that was said to him and did not distinguish between one object and another. Now he will bring anything for which he is asked, and helps me with my home work. He also knows the shops which I frequent, and the post office, by name; also the names of his sisters and of coachmen in the mews, and other persons.

“AMELIA PASSEY.”

Certified by “SISTER MAUD.”

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Case No. 20.—*Deafness and Scrofula.*

Miss —, employed in the Post Office, 18 years of age, had been deaf and had running abscesses in both ears from her earliest childhood. When she applied for treatment she was in a shattered state of health, and could not long have continued to perform any work. In three months and a half she was restored to health, the abscesses were healed, and her hearing had become so perfect that she then underwent the medical board examination for the telegraph department, and was admitted. The *test for hearing is very severe in that examination*, as the telegraph clerks must be able to hear the faintest click of the registering apparatus from a considerable distance. She passed successfully last year at the end of her treatment at our hospital, and was appointed to one of the Post Offices in Regent Street. The instruments used in her case were chiefly my electro-injectors, and magneto-voltaic batteries with centripetal currents.

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Cases No. 21, 22.—*Loss of Voice in the case of Vocalists.*

The cures of Chevalier Scovel and of Signor Perotti have been the subject of so many reports and comments in European and American newspapers, that they need only be just mentioned here. Signor Perotti was to sing in "Tannhäuser" at Covent Garden during the operatic season of 1891, for the first appearance of Madame Albani. Two days before, his vocal cords were so congested that his voice could not be heard. He was treated by me, and sang on the appointed day with complete success, to the great satisfaction of Sir Augustus Harris, who had already had to alter the bill on the Thursday preceding on account of Signor Perotti's illness, and did not relish the idea of doing so again on the following Saturday.

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Case No. 23.—*Rupture of a Blood-Vessel ; Pleurisy  
and obstinate Constipation.*

Daniel Sullivan, a labourer, was jammed by the fall of a girder ; broke a blood-vessel ; went to St. George's Hospital, and left after 17 days, as he was no better. He lingered on until he was treated at our hospital. After 6 weeks' treatment he was able to resume his work. He had ceased to spit blood ; his appetite had returned ; the breathing was normal, and the daily functions regular. He called a few days ago, and stated that he has been well ever since—that is for the last two years. The treatment consisted of alternate transversal and centripetal currents of different natures with the magneto-voltaic batteries.

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Case No. 24.—*Spinal Curvature and Muscular Atrophy,  
and a severe attack of Influenza.*

Mr. Dudley Yorke, a young gentleman of position, was in such an enfeebled state of health, that he could hardly go up a single flight of stairs, or walk, or lift even small weights. After 2 months' treatment, he was able to go on a yachting tour to the Baltic. He could then hold 8 lbs. at arm's length for 50 seconds. His breathing powers were nearly normal, and he could walk for many miles without feeling fatigue. On his return, he continued treatment during the winter, until his cerebral faculties were restored, and he began to resume his pen and take to literary work.

21 KENSINGTON COURT MANSIONS,  
14th April, 1891.

“My Dear Professor d'Odiardi,—I consider it as my *duty*, now that I am feeling a new man, to con-

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vey to you some slight expression of the obligations I am under to you.

“When I first put myself in your hands, I was, I feel certainly, on a rapid, downward course, which could end only in the grave. In spite of all the disadvantages of weather—and I fear also sometimes, my own <sup>IMPRUDENCE</sup>—~~impudence~~—I have steadily increased in strength and well-being, till I have now reached a state of health I had never attained before.

“It is my intention, in case of need, to always resort to you, and to follow your instructions implicitly.—Believe me, Dear Professor,

“Yours most sincerely,

“A. DUDLEY YORKE.

“PROFESSOR E. SAVARY D'ODIARDI.”

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Case No. 25.—*Goître.*

Mr. —, age about 27, lived for a long time in China, and had a goitre from the age of 12. The growth was enormous, projecting 5 or 6 inches in the front side of the neck, when he applied for treatment. He had been under treatment, off and on, up to that time; but the growth had always been increasing in size, and his condition was such, that he was unable to undertake any regular work. An operation was found impossible, except for the removal of a small part of the growth in front. The deformity would thus have been made more conspicuous still. So Mr. — wisely refused to have it performed. He has now been a year and a half under treatment; the growth has been so considerably reduced, that it no longer attracts notice. His health has been gradually restored, and he has obtained a good situation, involving a great deal of work. Had the cure been more speedy it would have wasted all the tissues as well as those of the goître.



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The case is not dismissed yet, and the remaining part of the growth will be gradually removed, as cautiously as that already dissolved by electric osmosis. But, even as it is, the patient is practically as well, and as little inconvenienced as if there were no growth at all.

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Case No. 26.—*Infantile Paralysis.*

A young child was brought some weeks ago by his mother. His left side was paralysed. He could not use his arm or hand, and had to turn sideways, and drag his leg so as to bring it forward. He can now use his left hand and arm freely, and there is a marked improvement in the movement of the leg. Case will not be dismissed before complete cure.

Case No. 27.—*Paralysis of Three Fingers owing to a Strain.*

Mr. Wright, a carpenter, got three fingers of his right hand jammed and strained by a tool, the consequence being, that those three fingers remained paralysed. No treatment had been of any avail, and the case was considered incurable. He believed himself maimed for life and deprived of all means of maintaining his family. He was completely cured in 6 months by the daily use of the liquid-electrode-injector. Case dismissed. Mr. Wright has returned to his work, and his hand is as active and strong as ever it was before.

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Case No. 28.—*Locomotor Ataxy.*

The patient is about 44 years of age. He is a carpenter, and has been gradually disabled during the

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last 5 years. He was an in-patient at a London hospital, but the progress of the disease could not be stopped. When he applied for treatment at our hospital, he was suffering incessantly from lightning pains in the legs, and was unable to stand or start when his eyes were closed. As soon as the eyelids were shut, his arms beat about wildly, and he fell. His general health was shattered by long disease, excruciating suffering, insomnia, dyspepsia, and privations consequent on the loss of his salary. He has now been under treatment about 2 months. He is regaining flesh and stamina. His health has immensely improved. He can walk to the hospital and back without falling, even in the snow and sleet, and can stand and start with closed eyes without difficulty. The complete cure is not anticipated for 3 or 4 months. But the present state of the patient is already most satisfactory. Case not dismissed yet.

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Case No. 29.—*Dipsomania.*

The representative of one of the largest and best known New York papers, about 30 years old, was fagged and worn out by parliamentary work. He had recourse to whisky as a palliative in order to go through the long sittings, followed by weary hours spent at the desk and at the telegraph office to cable the reports. He had become unable to continue his work when he met me. His friends chaffed him and asked him to confide the real cause of his trouble to me. He did so frankly, adding that he had visited all the Homes for Inebriates in England with the hope of finding some useful treatment, and had been informed that the ordinary treatment lasted from one to two years. He was persuaded by his friends to place himself under my care. He ceased to drink whisky, and became a teetotaler from the very first sitting. He never felt any inconvenience, and from that time worked without the

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slightest fatigue or nervous depression. Three weeks afterwards he started for New York perfectly cured. This case created a great sensation in America, owing to a full report in his newspaper. My treatment of dipsomania is simply calculated to prevent nervous depression, which is the main cause of the craving for drink. I am not able to do more, but it generally proves successful.

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Case No. 30.—*Gouty Rheumatism.*

Mrs. — is about 50. She is a portrait painter, and has been several years disabled by gouty rheumatism. When she applied for treatment her hands and feet were unshapen masses of swollen flesh and chalky deposits, the joints being considerably enlarged. The fingers of the right hand stuck out in all directions

the joints being stiff and immovable. Consequently she could not hold a brush in that hand. After about a year's treatment she recovered the use of her hands and feet. Not only can she hold a brush and paint as well as she did before, but she can bend, raise, and lower her fingers freely enough to play on the piano. Cured—case dismissed.

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Case No. 31.—*Facial Tumour.*

The superintendent of a house of English Sisters in the South of France was cured of a facial tumour in a month and a half. She had come over to have it excised, and was overjoyed to return without recourse to the knife.

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Case No. 32.—*Consumption.*

Miss — came with the following symptoms: loss of flesh; emaciation of chest and shoulders; excessive night and daily sweats; dyspnoea; cough with flushings; suffocation; expectoration; hæmoptysis; œdema of face, hands, and feet; lower lip much swollen; mouth permanently wide open; head hanging down; saliva running out of the mouth; subject to frequent attacks of bronchitis; cracked pot resonance of chest; cavernous breathings; loud vocal fremitus; pulse fluctuating from 130 to 160. Temperature variable—always high. Inability to perform any work. Entered April 8th, 1891. Case dismissed in October, 1891, completely cured. Followed to Mentone, as a help, the matron, case No. 31; was not ill once while employed by her, and proved an invaluable worker. (Matron's own written report.) Had been unsuccessfully treated before at the Hospital for Consumption.

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Case No. 33.—*Idiocy.*

Mr. — (age about 27) had been educated up to the age of 13, when his skull elongated and he became an idiot, and forgot everything he had been taught. He was apprenticed to a harness-maker, and the only work he could perform was to pass a needle and thread through leather in holes which had been perforated beforehand. His speech had become restricted to affirmations and negations. Rarely more than *yes* or *no* issued from his lips. Such was his state when he began treatment at our hospital. His case was dismissed after one year. He was so far improved that he could then read, and also write letters like a person in the full possession of mental powers, and has been promoted by his master to new functions, and now collects orders and money for him. He is reported to give full satisfaction in that capacity, and seems now to have resumed his intellectual growth from the very stage he had reached when his mental



powers left him. Compare this with cases No. 18 and 19. It may be remarked here that electricity had not been supposed by medical practitioners to exercise any beneficial action in mental cases. My treatment leads to a different conclusion, and I have obtained excellent authenticated results in cases hitherto deemed absolutely hopeless. The case of idiocy just described of a boy who had remained an idiot from the age of 13 to the age of 27, might certainly have been considered hopeless and the cure unprecedented.

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*Conclusion.*

Many other such cases might be recorded here were it not for want of space, because this book must necessarily be short, <sup>OR</sup> ~~as~~ the general reader would not take the trouble to read it.

The cases quoted were all supposed to be hopeless—had all been treated for considerable periods, some of

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them for 15, 16, or 24 years. We have now one (a spinal case) of 42 years' standing, which is yielding to treatment.\*

Inquiry is invited, and also investigation from all medical gentlemen. Many of them come to see and investigate, and are most welcome.

Visitors or inquirers may apply to the Sisters in charge of the Hospital, 30 Silver Street, Notting Hill Gate; or, at 43 Cornwall Gardens, Gloucester Road, S.W.

\* Mrs —, at 2 years of age, was dropped by a nurse and fell on her back. Two dorsal vertebræ were displaced, and have projected ever since, resulting in constant pain, neurosis and inability to bear any exertion. She had always to lie down part of the day. She was a sufferer for *42 years*, and has now been cured after 4 months' treatment. She had been under medical treatment for the greater part of 42 years, but without avail.

# MEDICAL ELECTRICITY.



# MEDICAL ELECTRICITY.

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ELECTRICITY has been employed in the treatment of disease for a considerable period, and by the most celebrated physicians.

*How can disease be cured by electricity?*

The answer is rather a complex one; but, even if no answer could be found, that would not be a sufficient reason for excluding electricity from the field of therapeutics. No one knows, it is true, what electricity is

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But no one knows either what light is, which does not prevent us from feeling and utilising its beneficial effects. Nor do we know anything about the real nature of any material or immaterial, ponderable or imponderable agent. No one understands primary causes. For instance, who could say why an infusion of willow twigs cures acute rheumatism? No one could. Still, salicine and salicilates are used in many cases, and frequently with success.

We are taught that salicylic acid opposes the development of ferments (*i.e.*, the generation of cryptogamic organisations) in wine, milk, and renal secretions, but not in ale or broth. Not one of our learned professors has ventured an explanation of this. We are told that the very same acid is transformed in the blood into salicylate of sodium, and appears

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as such eight minutes after ingestion, in the renal secretions.

It causes deafness, but does not usually disturb the sight. Its employment also occasions continual vertigo and wild delirium, much more than sulphate of quinine does. It hardly lowers the temperature in a healthy man at all, but lowers it as much as 3 degrees when there is fever. Bouchard says that this result is due to its antiseptic properties. But considering that this drug first accelerates, then slackens the pulse in the healthy man, and does not accelerate or slacken the pulse of fever-stricken patients, Bouchard's explanation fails. Breathing is accelerated by massive doses of that acid, but doses larger than half an ounce cause collapse of the heart, lower the arterial tension, bring on suffocation, albuminuria, and death through syncope. It is useful in

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some kinds of arthritis, and useless in others, useful in locomotor ataxy, and useless in gout. We are taught all that, but no one has yet suggested a satisfactory explanation. The same may be said of every drug and medicinal agent acting by ingestion and elimination. The very same drug produces totally different effects on subjects of different ages and sexes whose organism has been built up by the assimilation of different foods; which means that the animal or vegetable fed on a soil, either granitic, chalky, siliceous, or alluvial, possesses different faculties for assimilation and elimination of medicinal agents,\* so that the drug which suits an inhabitant of Brittany, a granitic country, may fail when employed with a native of Dorset or Lancashire. No

\* They assimilate best what has been grown on the soil where they were born and bred.



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*materia medica* provides for that. Then again, the Brittany or Dorset or Lancashire natives fed on vegetables, on fish, on meat, teetotalers, moderate drinkers, or confirmed drunkards, will be affected differently by the same dose of the same drug. Again, what one eats when the glass is high produces different effects when the glass falls. The drug taken in the morning at sunrise does not act in the same manner when the sun passes the meridian, or when it sinks in the West at the close of day. Cases of apoplexy are more frequent at the moment of conjunctions and oppositions of the sun and moon, which also cause an increase of morbid symptoms in neurotic affections. In all nations the inhabitants of the sea-shore say, when speaking of a sick person *in articulo mortis*: "He will die at low tide." Such is the in-

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fluence of auxiliary causes and surroundings. Who, as already remarked, has ever attempted to give an explanation of them? Our ignorance of primary causes is absolute, and cannot be exceeded except when one ventures to tender an explanation!

Bishop Dupanloup once met an incredulous gentleman who would not go to church because he did not understand religion. "You are eating an omelette, I think!" said the bishop. "I am." "Could you tell me," asked the prelate, "why the fire hardened the eggs and melted the butter? No! You cannot guess! Why, then, you do not understand omelettes, and ought not to eat them!"

In like manner, if one was only to use drugs, the effects of which can be satisfactorily accounted for, how few would remain in our *materia medica*! The botanical character of

plants cannot even be taken into consideration as a basis for an accurate medical classification, because plants belonging to the same family may possess opposite medicinal properties. Their chemical character plays only a secondary part in their physiological action. To call them narcotics, like tobacco and opium, and antiscorbutics, like gentian or cochlearia, in other words, to give them an appellation based on their apparent effects, is to attribute to many plants qualities which they only possess when employed in a certain dose, the effect produced by a larger or smaller dose being quite different. Digitalis, for instance, increases the valvular contractions of the heart when given in small doses, whilst massive doses will, on the contrary, bring on a depression and weaken such contractions. Weak doses repeated produce the effects of strong

doses through a phenomenon called *accumulation*. Very few, if any, drugs do *not* accumulate in the system; so that a narcotic becomes a stimulant and *vice versa*. What classification could be adopted in the present state of science? All medical agents may be described as belonging to six different groups or classes, which include the whole *materia medica*. The first class is composed of such substances as act on the nerves and muscles, or on the neuro-muscular system, as it is technically called. Some of these act on the heart, *i.e.*, are the *poisons* of the heart: *digitalis* is the type of that group of cardiac remedies. Others act on the vascular system, that is to say, on the blood-ducts, like ergot of rye and bromide of potassium. Another group of these agents depresses the motor nerves, aconite and conium maculatum, or

another of its congeners, "phellandrium aquaticum," being the representatives of that group. Socrates was poisoned by an infusion of *conium maculatum*. Then again, there exists another division which may be described as excitants of the whole motor nerves, to wit: ammonia, or excitants of the brain or encephalon, such as opium; or of the spinal cord, such as strychnine. We next find the depressors of the reflex action of the spinal cord, the types of which would be hydrocyanic, *alias* "prussic" acid, so called after the country of its inventor, the Prussian Scheele, who died in three hours from having spilt a few drops of that acid on his arm. Chloroform and chloral belong to the same group. The first class of medicinal agents includes, therefore, five groups or subdivisions.

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The second class is composed of trophics, or nutrients, *i.e.*, promoters of nutrition. This class contains four groups. The first of these consists of trophics proper, such as cod-liver oil, iron, and phosphate of calcium. The second group is made up of secondary trophics, which act by association, such as alcoholics, coffee, tea, and coca. The third group includes the *auxiliary* trophics, that is to say, bitters, quinine, etc. The fourth or last group of this class is that of the trophics of the vascular system, namely: metals turpentine, tannins. After the nutrients or agents of reconstruction, come, naturally, the agents of demolition or elimination, called dystrophics or denutrients, forming the third class. These act favourably on the organism when taken in small doses only. We find here five groups of partial

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dystrophics, *i.e.*, of agents which act as trophics or dystrophics, according to dose, (2) of modifiers of gases, (3) of the red globules of the blood, and also (4) generators of fat, called steatogene poisons, and lastly (5) general denutrients.

Other agents, again, produce in the tissues, through which they are eliminated, changes and alterations which may be utilised for the cure of disease: these form the fourth class.

Antiseptics, or parasiticides, compose the whole of the fifth class.

The last class of all, the sixth, numbers disconnected agents such as caustics, water, heat, cold, etc. Many readers will be surprised to hear that no other distinction can now be made between the medicinal agents or drugs, and that every other classification ought to be considered as superseded.

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A system of therapeutics ought therefore to include modes of action corresponding to the sixth classes mentioned above, and to their various groups. So that any agent which will increase arterial tension may be considered an equivalent for small doses of digitalis. Any agent improving nutrition, and increasing the number of the red globules of the blood, will be fit to replace iron, and so on, for every class, group, and drug. The great desideratum is, that no reaction in a contrary direction should result from the employment of auxiliary forces which ought only to bring back the subject towards a normal state. † There exist electric equivalents for drugs which now constitute a complete *materia medica* of electric treatment. The variety of our electric apparatus, and their powers of direction and penetration,



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and also transformation of electric currents, have made the work relatively easy; but it was not so until I found out the true principles which are likely to become the pole-star of medical electricians. For instance, one way of raising the pulse is to act on a nerve situated in the heart, which is the depressor of circulation. By weakening the action of that nerve, one may increase the pulse at will, both in frequency and quantity.

My principal mode of relieving congestion of the lungs is to send torrents of blood through the lungs, at the same time widening all abdominal arteries so as to allow the heart to be easily emptied at every pulsation. The result is that the pulse and the temperature fall rapidly, and all congestion disappears. These two instances will prove that this mode of action is entirely

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different from any electric treatment hitherto employed. In this novel manner electric forces may be applied to each part of the human machinery with such a degree of precision, that, even in a case entirely new and unprecedented, one could find, by working out these principles according to the different features of the disease, the precise mode of operating which will check the morbid symptoms manifested. The only difficulty is in surgical cases, where the knife has penetrated deeply into the tissues, and left there abnormal traces of its interference. Such cases are always a source of great uncertainty and trouble. I do not advocate the employment of electricity *alone*; but, besides using all kinds of electric or magnetic forces in the aggregate, I find immense help in the employment of gases and liquids,

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loaded with electricity, and used externally or in natural passages.

Among the combinations of electric currents there is one which is most effective, and which I call "interference waves," *i.e.*, different systems of electric undulations, the crests and troughs of which do not coincide any more than their direction. For instance, I associate a direct continuous system ~~of~~ *with* waves which move backwards and forwards alternately.

I also use volatilised metals and minerals for the purpose of inhalation, or for mixing with pulverised liquids. I find that the vapour of gold is a good substitute for mercury as a denutrient. Arsenical vapours ought to be tried for the cure of leprosy. The study of the therapeutic action of metals and minerals volatilised by electricity, with a

voltage varying from 30,000 to 150,000, will prove one of the richest fields in the therapeutics of the future. The vapours of metals will be found invaluable as agents of the fifth, or antiseptic class. Some bacilli *live* in oxygen, and some are *killed* by oxygen; but all of them will be destroyed by certain metallic vapours.

Sleep may be produced in a few minutes by the application of electricity on certain nervous centres with the electro-pneumatic vapouriser.

Abscesses may be resorbed, sinuses stimulated, sacs emptied, and afterwards healed from the bottom with the abscess-healer.

The temperature of the body may be raised or lowered; the breathing increased or diminished; secretions stopped or increased; natural functions generally brought to the

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normal or exaggerated, and also checked. Nervous lesions can be healed, and clots of blood or thrombuses dissolved.

I have seen a varix disappear from a young lady's nose in ten minutes. She had been unsuccessfully treated for it for two years.

The new electro - medical treatment requires the greatest care. For instance, certain respiratory sittings cannot be administered without danger within an hour and a half after a full meal. Sittings for improving the portal circulation belong to the same class, and would be objectionable during the early stages of digestion.

Electricity may be employed allopathically or homœopathically. Fever can be cured by increasing it, and also by checking it. I sometimes, therefore, increase the arterial tension, and sometimes decrease it in order to

subdue a fever. During the period of *stasis*, it is often advisable to operate homœopathically by increasing the arterial pressure. It is also very often necessary to increase diarrhœa instead of checking it.

Electricity belongs, therefore, as a medicinal agent, both to the allopathic and homœopathic systems. Which of the two is to be preferred? I answer: the circumstances of the case must decide. If a patient is cold and chilly, I should never think of administering a refrigerating current; nor would I in a case of sunstroke depress the nerve of Cyon, and cause a rush of blood towards the brain. On the contrary, I would increase the activity of that nerve so as to check the circulation.

In addition to these methods, an entirely new and most effective aid in diagnosis, based

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on the skilled use of the pneumodynamometer, may here be described. The state of the patient, the favourable or unfavourable progress of the disease, is indicated by figures in that instrument with the precision of clock-work. A forecast of disease may also be obtained, and a person supposed to be in health may thus be found to have a tendency to organic and insidious diseases, even years before they are likely to break out. As an illustration of this, I will give the results of a recent case.

The test lasts four minutes, during which the patient is made to blow into the instrument so as to raise a column of mercury in one tube and depress it in the other. The column of mercury thus indicates the pressure produced by the patient's exertion. The duration of the effort is carefully noted, and

also the pressure in inches and tenths of an inch. Result: the pulse of the patient *before* the test was 78, strong and full; it was reduced *after* the test to 68, and had become thin and irregular. The temperature was normal before, and rose after the test by  $\frac{2}{5}$  of a degree. The breathing, bad before the test, improved considerably, inspiration and expiration taking place in 2 seconds before the test and 3 seconds afterwards. The pressure was 1 inch and  $\frac{2}{10}$ , kept on during 24 to 28 seconds. The mercury was perfectly steady. The hands, cold and very moist before the test, had become warm and almost dry.

Such were the principal elements for diagnosis afforded by the instrument in this case. The conclusions were these:—The pressure obtained, the length of time during



which it was kept on, and the steadiness of the column of mercury, together with the improvement in the breathing, clearly indicated that there was no organic disease of the lungs or the heart. The fall of the pulse taken in connection with the rise of temperature, as shown by the thermometer placed in the mouth, and the temperature of the hands, these becoming dry, showed nervous debility caused by disease of the marrow of the spinal cord, a disease called myelitis, and by renal disorders. The patient read the chart and was much surprised, saying that three members of his family had already died of Bright's disease. He had only reached the first stage of renal disturbance.

The above figures being recorded, a new test will take place every week, and the new figures of the subsequent tests will indicate with

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mathematical precision the progress of retrogression of the disease. This automatic system of diagnosis is practically infallible, and allows a medical man to work with a perfect knowledge of the state of each organ, of the improvements obtained, and of the blanks to be filled up. Have I succeeded in giving the general reader some idea of what electro-medical treatment means? It is very different from the haphazard application of it, and the present advanced stage of electric treatment may claim to be as scientific as any of the most advanced branches of the physical sciences and of medical therapeutics. We do not know more about electricity than we do about drugs, but we may safely affirm that we know quite as much!

*The writer of the foregoing and of the ELECTRO-MATERIA MEDICA (in preparation) has been awarded the Medal of Honour by the French Humane Society, and by the National Commission presided over by Monsieur Jules Simon.*

## Diploma

THE Medal of Honour is awarded to PROFESSOR E. SAVARY D'ODIARDI for devotion towards humanity.

(Signed) JULES SIMON.

*President of the Commission for the  
Reward of Noble Deeds.*

HONORÉ ARNOUL,  
*Secretary.*

PARIS HOTEL DE VILLE,  
2nd June, 1889.