Canniff (Wm)

Nature's Power to Heal. By WILLIAM CANNIFF M.D., M.R.C.S.E., Toronto. Surgeon to the Toronto General Hospital. Prepared for the Canadian Medical Association.

Mr. President and Gentlemen :

In the paper I now have the honour to present for your consideration, I may not be able to claim much originality. The thoughts and reflections are, in a measure, the faint echo of what has been before now advanced by others. The necessity has been laid upon me of saying something at the present meeting of this Association, upon the subject of Surgery. I can hardly say that it is a report upon the subject but I wish to declare to you that I did all I could to secure for your prepared appetites something worthy of the occasion. At an early day I wrote to my esteemed friend, Dr. Hingston, reminding him of this particular duty; but he had become Lord Mayor of the great commercial metropolis of the Dominion, and so could not undertake the important work. And I am sure you will allow me here to observe that Montreal, in honouring a distinguished member of the Medical profession, one of her most respected citizens, did itself infinite credit, and is four-fold honoured in the possession of so

worthy a head. I also wrote to my equally respected friend, Dr. Grant, who had been appointed, with Dr. Hingston and myself, to report on Surgery But circumstances made it impossible for him to attend to the matter. Occupying the responsible and honourable position of Medical adviser to the Governor General's family, he could not hesitate to respond to the call, to accompany that esteemed family across the Atlantic; and, if time and brain-work and worth are duly rewarded, Dr. Grant's outgoing, although I have no doubt extremely agreeable, will be followed by more pleasant incomings. So you see that if a proper report on Surgery, worthy of the science and of the Association, is not forthcoming here to-day, it is not because I did not use my best efforts to secure the active services of two of the most prominent surgeons of the Dominion.

With these explanatory remarks I will now venture to present to you a few remarks, somewhat disjointed it may be, upon a subject by no means new, but one of never-ceasing importance. I refer to the subject of *Nature's Power to Heal.*

I trust you will pardon anything I may say which appears like self-assertion or egotism. After one has been in practice a number of years, although he may lose faith in a good many things he was taught to believe as a student, he is likely to become bigoted, so far as his own experience is concerned.

Before proceeding I would call attention to the fact that, upon this continent, neither in the United States nor Canada, is found a distinction between the physician and surgeon. Here and there in

cities and larger towns exist one who gives his attention more particularly to one of these branches of the medical science or to midwifery, but mainly a doctor in this country means a physician, surgeon and accoucheur altogether. Although prepared to admit that the distinction, such as exists in Great Britain may be advocated with some good arguments, I must say I think it is fortunate we have not adopted the custom. In a new country, sparsely settled, it is not often that a field in either branches can be found sufficiently large to satisfy the practitioner in any specialty. This, doubtless, is the reason that mostly all medical men in America are general practitioners. There is to my mind a more cogent reason why medicine and surgery should not be severed. So far as surgery is an art, it may occupy a distinct place without detriment, but, when we regard it as a science, and examine the basis upon which it rests, we find one that is common to it and medicine—the physiological and pathological facts which form the ground-work of one constitutes the basis of the other. And in the field of practice, he will fall sadly short who attempts to treat surgical affections without a knowledge of the principles of medicine; while the exclusive physician, who has little or no knowledge of what more particularly belongs to surgery, will often fail to render full justice to his patient. Such being the case, and with the subject I have to treat, I shall not confine myself entirely to what particularly belongs to surgery.

The power of Nature to restore parts both internally and externally in every tissue of the body, is, I

fear, not fully appreciated and trusted; is not sufficiently studied, and therefore not understood; as a trustworthy guide in the treatment of disease and injuries, she is too frequently ignored. I must go further and express my opinion that very often Nature is thwarted in her efforts, instead of being humbly followed. It may seem a startling and severe assertion, but, nevertheless, I believe that in the practice of not a few, as much is done to interrupt the work of Nature as to assist—in other words: as many would recover from sickness and injuries, and as speedily, without treatment as with it, in the aggregate. I do not mean to say that no benefit is derived from the administrations of the doctor, on the contrary, I am sure there is no one so badly qualified by nature and education to practice, who does not sometimes, perhaps often, afford relief to his patients; at the same time I cannot repress the conviction that in many cases the doctor who has successfully treated one case, will with his next patient, by the injudicious use of drugs, or by interference of some kind, arrest, or retard the work of Nature. Do not misunderstand me. I am not here to condemn the profession, but to point out what appears to me to be defects, in order that they may be removed. It is a noble and inspiriting thought that one has saved life, allayed pain, and abbreviated distress, and I would that this feeling should not be marred by the thought that, perhaps, if such and and such a thing had not been done, the patient would have suffered less, or have recovered, whereas, he died. Such unhappy reflections will now and

then obtrude themselves in our every-day practice, unless the practitioner is animated by a sublime egotism. However, we are not called upon unnecessarily to write bitter things of ourselves; at the same time it is unquestionably our duty to be as certain as we can that we are not running counter to nature in our course of treatment. Mistakes will, no doubt, occur even with the most efficient and conscientious; but with the constant acquisition of knowledge in relation to our profession, there ought to be commensurate improvement in the treatment of cases, and advantage to the sick. That very much has been gained in the direction I am advocating there can be no doubt; but I urge the plea that Nature should be trusted more than she is. It was one of the first things I learned from my first teacher that, "meddlesome midwifery is bad." Experience has fully established the truthfulness of the statement. But I am just as well convinced that meddlesome surgery is bad, and meddlesome medicine is bad. What is it that has given success so frequently to the Homœopathic physician, who faithfully treated his patients with infinitesimal doses? Was it not due to the fact that Nature was left untrammelled to work her cure, sustained at the same time, by faith operating through the mind upon the nervous system? I have now and again had patients who, having failed to improve under the use of drugs, at once began to mend when discontinued; and I have had medical friends make the same statement. While I write there come to us from England the information that a religious sect, known

as "The Peculiar People," and who do not believe at all in medical treatment, have opened an hospital for the sick, into which the disciples of Esculapius shall never enter. Now, I shall not be surprised to learn that the mortality and duration of disease at this institution are no greater than in the best appointed hospitals of London. And there is no doubt these peculiar people, who, although zealously religous, do not seem to be fools, have, by observation, convinced themselves that their prayers accomplish as much as is done by the regularly qualified medical man. From the position I assume the fallacy contained in Professor Tyndall's proposition to test the efficacy of prayer in healing the sick is at once apparent.

The well-known Dr. Todd, in speaking of Erysipelas divided cases into three classes; one class consists of those who will get well without treatment, perhaps I may add, in spite of bad treatment; another class will die, notwithstanding the most judicious treatment; the third-class, which may not be large, is composed of those who will live or die, according as the treatment is proper or improper. So then, so far as the effects of treatment upon life goes, we may take it for granted that the cases are comparatively few where the balance is turned, one way or the other, by any treatment. But the important fact remains that the medical man's duty is not limited to treating extreme cases. It is an important part of his function to allay suffering and prolong life; therefore, it is incumbent upon him to possess that knowledge of nature's laws, which we

find exhibited in man's physical system,—that he may be fully equipped for the path he has to tread.

The knowledge requisite is not only to enable him to do what is necessary, but to avoid that which is unnecessary. The medical man is almost daily tempted to do something when he knows that nothing is really required. In fact, it is often necessary to do something to satisfy the patient or his friends. The do-nothing course is rarely satisfactory to the world, with its present limited education respecting the laws which govern life and disease. And it is not unfrequently a question of some importance to the medical man "how not to do it." The administration of bread pills and tinctured water is one of the clumsy ways of solving the question. But, apart from this morbid desire on the part of the public, and the expectations that medicine will be given, does not the doctor sometimes magnify his office by unnecessary service? The result is not only that prescriptions are written generally in a style of mystery which originated in the dark ages, and which was employed by imposters; but the surgeon proceeds to probe a wound with no possible benefit to the patient; he introduces a suture unnecessarily, to produce an impression, perhaps to gain an extra fee, a fractured limb is manipulated, whereby the limbs, it may be the life is placed in jeopardy. Of course, the patient may not be so willing to pay a proper fee when no medicine is given, or when you bring fragments of a broken bone into position so gently that he fails to detect just when the bone is set.

But is it not a duty we owe to science, and to the dignity of our office, to endeavour to educate the public to a proper appreciation of the true function of the medical man. Now, with regard to this point, so far as the physician is concerned, I hold that he should be supurseded in a great measure at least, by the Sanitarian. I believe the time will come when our profession will be most frequently employed to prevent disease, when preventable; not by the administration of drugs, but by the application of those sanitary laws which science reveals. It cannot be expected that disease will be entirely prevented, so that we will have to continue to act as physicians. Certainly, injuries of various kinds will continue to befall man which no surgeon can foresee or prevent.

Many obstacles to the reform I have referred to might be mentioned, one is the strong conservative feeling which causes the profession to retain, with much tenacity, the forms of prescription which originated in ante-civilization times. I have often thought that the use of Latin in writing prescriptions was a pedantic sham. Some of the signs employed are convenient, and words in the abbreviated form can be quickly penned; but this is all that can be said in favour of continuing what is really a relic of barbarism, when an educated few took advantage of the ignorant and credulous mass. But it may be asked what has this to do with *Nature's Power to Heal?* I reply it has much to do with it. If we wish our profession to attain that position which it legitimately should possess, we must discard every thing bearing the appearance of mystery or secrecy.

Prescriptions must be written in plain language, and if the patient desires to know what you are giving him let him know; and then will follow this important advantage: the druggists will not commit mistakes in their efforts to interpret prescriptions. This emancipation will materially tend to foster a dependence upon Nature, rather than drugs.

Coming to the subject of Surgery, more especially, it is hardly necessary for me to mention the various ways in which are manifested Nature's power to heal —to restore parts. Mostly every medical man is familiar with the writings of Paget and Billroth. These investigators, as well as others, have demonstrated that in all the multiform lesions met with in the human system resulting from injuries and disease—in every tissue of the body, Nature ever stands ready to undertake the work of repair; and if the system be in a healthy state and Nature be not interfered with in her action, the power to restore parts is often striking and marvellous. In a large number of cases, all that the patient requires is *rest*. It is at such times that the meddlesome surgeon may work mischief. Many years ago I read with much care a course of lectures by Mr. Hilton, of London upon the subject of rest—mechanical rest and physiological rest; and the benefit I thus derived I cannot over-estimate. Rest is, in fact, the principal, the great pre-requisite to enable nature to accomplish her work of healing. Rest of body and mind. Pain, so common an attendant of disease and lesions, indicates a state incompatible with healing. The pain may result from the absence of rest, or it may be

Nature's cry for assistance: and, it is a part of the surgeon's duty to respond to this cry. He should distinguish between these two causes of pain, and endeavor to remove them. But it is his first duty to try to prevent pain; and he should see to it that he never is the cause of pain. The surgeon's art will often furnish to nature essential aid whereby she may more promptly and efficiently accomplish her task. Failing to receive any assistance from Art we often find Nature, nothing daunted, resorting to other means to effect a cure—taking further and more complicated steps, often marvellous and beautiful. For the sake of illustration we will take a broken bone, a simple fracture. Union between the fragments would rapidly take place if the limb were kept in a state of rest; but in consequence of neglect of the surgeon, or wilfulness of the patient, or some other cause, motion is permitted. The result is the arrest of the healing process—of the ossific union of the pieces. The motion has caused pain, the pain has led to congestion, congestion produces fibrinous effusion; and this results in the formation of more extensive provisional callus, or "en-sheath ing." By this means the ends of the bones are retained in a fixed position, rest is secured; and after this—after these successive and wise steps by Nature, the work of repair between the fragments will proceed. Thus we learn that the designation of Nature's Splints to the ensheathing callus is well applied. But in a simple fracture Nature should not be called upon to form this splint; Art should apply it, and thus enable Nature to immediately un-

dertake the work of repair. The resources of Nature with regard to healing are wonderful. The observant surgeon and physician will notice them in many ways. The adhesions which form between the layers of peritoneum may justly be regarded as an untoward event, so far as the future comfort and efficiency of the patient are concerned; still are we not to look upon such adhesions as a method of Nature to secure rest of the intestinal tract, and thus remove the cause of continued inflammation, whatever may have been the primary cause of the disease. And when the pluræ costalis and pulmonalis are glued together by inflammatory lymph, and the pericardium becomes adherent to the heart—although in many respects disastrous—must we not, nevertheless, recognize the only way (and being the only one a wise way) by which a degree of rest is obtained for organs whose functions render absolute repose an impossibility. Continued inflammatory action would result in death, but it is arrested by Nature in the way stated, and life is preserved although crippled. I need hardly stay to point out a fact so apparent that in many cases a timely course of medical treatment would have rendered this work of nature unnecessary; and life, not only would have been preserved, but the body retained in its original perfect condition. One more illustration is found in the process of cure by Nature in aneurisms, and another in the several steps whereby a divided artery is effectually closed.

The powers of Nature are often manifested not merely to preserve life and function, but where function has been destroyed, or impaired, to repair and

restore. The power to restore lost parts is limited, but the power to recover function is far greater than generally supposed. Even while the disease is in progress, we often find efforts put forth to limit the loss of, or preserve function. Take, for instance, disease of the joint. During the course of the disease, while active destruction of tissue is taking place in the joint, Nature will be throwing out new material out of which to form a new structure, which will in some degree become a substitute for that destroyed. Again, in case of excision of a joint, what do we see taking place? If the two bones are retained for a sufficient length of time in a state of immobility, firm union follows; and this, in many cases, is all that can be expected. But in some cases Nature attains a far higher result. A stiff limb is better than an artificial one, but to have the limb not only saved but its functions preserved is an achievement of Nature, often witnessed by the surgeon. This higher result after resection, is perhaps more common than is supposed, and I have seen cases where it took place in spite of the effort of the surgeon to obtain anchylosis. Again, while it would be commonplace to refer to the fact as often witnessed, that the surfaces of an incised wound, when retained in contact in a state of rest, will rapidly and enduringly unite; it may not be so destitute of interest to notice a subsequent event. When a wound has healed, which may be in a few days time, the part is restored to its ordinary usefulness. This might be deemed sufficient; but Nature will do more than this. Life has been preserved, the member has been preserved,

the functions have been perfectly preserved, what more? Unsightliness will next engage the attention of Nature. Beauty and harmony of symmetry must likewise be restored. If the part be hidden by apparel, of course this is a matter of no importance, but if exposed, especially if about the face, then the importance may be of considerable magnitude. Nothing, in fact, to some minds, can be more distressing than to have an unseemly scar upon the face, seen by all. Now, towards the removal of cicatrices the surgeon can do little, or nothing, but Nature is not so impotent. Surely, although slowly, the scar wears away, and in time, may disappear: nay, often does. But whether a total removal takes place or not, the effort of Nature to reach that end, only ceases with life itself. In this continued endeavour of Nature, the surgeon fortunately can do nothing to retard the work, short of violence; but he may, and often does more to prevent primary union of wounds than he does to assist.

It is, however, in severely crushed, or torn wounds that an additional and exceedingly wise course is pursued by Nature, for the purpose of saving and restoring tissue; around the wound is a certain portion of tissue more or less injured, some of it will, or may recover; while some of it must die. Where the boundary line is to be drawn Nature must decide. It is she who will examine the molecular parts, and determine which can, and which cannot be restored, which portion shall be resored to vitality, and again enter upon the active duties of molecular life; and which shall perish and

be cast off. And, as Nature will in time amputate a whole limb in a palpable manner, so will she, although impalpably, sequestrate the doomed tissue around the wound and at the same time furnish a vehicle to carry off the detritus. The out-flowing serum or liquor sanguinus often constitutes a channel by which the offal, so to speak, is washed away, which if allowed to remain, would become a putrefying substance, to poison adjacent tissue, yet suffering from injury. After the work of sequestration has been completed, and in this way disposed of, nothing may remain but for Nature to close up the wound by granulation or second intention. But, alas, these wise efforts of Nature are often rudely interfered with, and in her first efforts she is entirely thwarted. In various ways this is sometimes done by the surgeon. I will not speak of the methods which were followed, in the past, a period of which we sometimes speak with an inconsiderate sneer, as if no unscientific treatment was ever pursued in the present day. The time I may reasonably expect to occupy will allow me only time to speak of a modern course of practice which, in the minds of some, appears to be equal to the old treatment of wounds by sympathy (sympathetical cure) where applications were made not to the wound but to the implement which inflicted the wound. Under this treatment it was found that wounds healed with wonderful rapidity, they being left in fact to the kindly operations of Nature Meanwhile the surgeon supposed it was the unguent applied to the weapon. Such folly would not be

tolerated now-a-days. However, we find among modern surgeons those who use and recommend carbolic paste and other agents impregnated with substances, having long compound names, to the wounds, or who employ some lotion or spray which has to be applied according to a certain formula, so intricate, that if success does not attend the treatment, it can easily be accounted for on the ground that the directions were not faithfully carried out. These applications possess some wonderful power to destroy supposed low forms of animal life, which (like the ærial spirits with which the Rosicrusians peopled the air) float about in every breeze waiting to flock into any solution of continuity upon the human body, upon mischief bent—to bewitch, as it were, the ultimate particles of the living tissue, so that instead of recovering themselves, and closing the breach in the surface, they perform fantastic tricks before the high priest, Nature, and thus turn the healing process into a process of death and decomposition. While there is no doubt the air is inhabited by myriads of low forms of life, and very likely these very often affect the human system by entering the blood through the lungs, it is a far-fetched theory that they in any way affect living tissue. Dead animal matter forms the most fruitful abode for them to propagate and grow; but that has nothing to do with the cause of that death.

But I fancy I hear some earnest disciple of Lister exclaim, how do you account for the result? I am tempted to reply, as the natives of a certain country are said sometimes to do, by asking another ques-

tion. If you do not believe in homœopathy how do you account for the success, which their statistics prove, attends the treatment of disease by their method? but I will not: I do not like, being a Canadian, to follow the teachings of any one simply because he belongs to a certain country. It was said of those who gained the most renown for curing wounds by the "sympathetical method" that they never undertook to heal *gunshot* wounds. Their operations were judiciously confined to simple incised wounds. Now I do not desire to convey the impression that those who practice according to Lister's theory with such success, either falsify the accounts given, or confine their treatment to cases of incised wounds. I think, certainly, that there might be found in connection with their practice something of the fallacy contained in the often quoted phrase *post hoc ergo propter hoc*. I am not going to deny the efficacy of carbolic acid and similar disinfecting agents. These it is well known, have great power to arrest, not the death of tissue, but its decomposition. Now what is it that favours decomposition of dead animal matter in any case? A dead body, the offal from the slaughter house, any animal tissue, deprived of life, is not at once poisonous; it is when it begins to putrify that it becomes noxious. And are we to believe that no such decomposition can take place without the aid of air germs? and yet we must entertain this view if we accept the doctrine of Lister that suppuration, in connection with wounds, is due to the active agency of these invisible degraded forms of life.

In connection with bruised wounds we often have rapid death of organic elements. If these be pent up within the wound, they are placed in the most favourable condition for speedy decomposition and putrefaction. Having putrefied, and remaining pent up, we have following all the disastrous circumstances of septic poisoning. Now, it is obvious to all that this could have been prevented, if one of two things had been done,—either a free escape of the fluid within the wound secured, or by the introduction of some agent, possessing the power to arrest decomposition. Of course the antiseptics possess the power to do this. But it will be perhaps urged that extensive experience, by different persons, in different parts of the world, has proved that unusual success attends the treatment of wounds by the application of certain pastes or putties; and of bandages applied in a certain way with proper precaution, and caution.

Allow this to be granted, but it does not follow that it was by excluding the air, or germs in the air, from the wound. The fact is the course of treatment laid down according to Lister's plan all tends to secure those conditions, so essential for the due operations of Nature's laws. We have cleanliness first and last; we have unusual attention by assistants to watch for, and remove every untoward circumstance; we have rest, so necessary, of the parts by the mechanical presure of the paste and bandages; also, by the same means, pressure is made whereby effusion is prevented. In fact the parts are pressed together and retained in a state of

rest. Congestion is thus limited, and the injured tissue placed in the most favorable condition for restoration to vitality. Yes, success does frequently attend the antiseptic treatment; but it is due to the circumstances attending that treatment. But the question remains, whether the same end could not be reached by far less complicated means and which are far less likely to fail, and, in failing lead to disaster. It is submitted that the antiseptic treatment proves beneficial by preventing the existence of, or of destroying the poisonous properties of putrefying organic matter arising from the body with which air germs have nothing to do. It is also submitted that this can be accomplished by means far more certain, far less troublesome, and will produce results far more satisfactory. It would occupy too much time and exceed the bounds of the object proposed in this paper, to point out at length the means to accomplish this. I cannot, however, omit speaking of the value of *pressure* as well as *position*. The drainage tube will often carry out fluid from the bottom of the wound but position of the body generally, and particularly of the part, will effect far more. Pressure generally by bandage is a most effective agency in squeezing out the fluid which is filling the spongy crushed tissue, so that healthy circulation of nutrient and reparative material may take place. While the softened tissue is filled with the products of passive congestion, of course the destruction of injured tissue is greater than when the position of the wound or other circumstances prevent a free drainage. It has been

recommended with much sound argument, that the boggy tissue should be as it were drained by means of the knife.

Judiciou-ly-made incisions will allow the noxious fluid to drain off and thus all the benefit of antiseptics will be obtained. Failing, however, by any means to effect necessary drainage, disinfectants should be used to prevent or destroy putrefying matter.

I will not pursue this subject further. My object, whether gained or not, has been to show that Nature possesses ability to heal, unaided, even the worst forms of wounds; and that while Art can render assistance, that assistance should be of a simple character, based on ordinary principles of natural philosophy, and guided by common sense, not on any visionary theory. In concluding my remarks I wish to speak of what I regard as the great agent for Repair. Some years ago in a publication, I advanced the theory that the principal purpose the fibrine of the blood served in the physical economy, was to heal tissue. This theory has been accepted by a number of writers. Limited in quantity, (a late writer says it is not present at all in the circulating blood in health) we find that when it is required, it rapidly increases in quantity and efficiency. Possessing limited vitality, it has yet sufficient power of organization to form a temporary, a pseudo tissue until the natural is reformed.

Incapable of perpetuating itself after it has become organized, it acts as a sort of scaffolding upon which the natural tissue is gradually built. Being used only

for a temporary purpose does not lessen its value, for how could a building be erected without accessory means. Doubtless it is derived from the nutrient elements of the blood, but those elements have passed the period of maturity. They were at one time qualified to enter into the formation of natural tissue, but, not being used, they passed on to decline. Still, although with lessened vitality, they were well adapted to serve an important purpose in case of need, like refuse timber, which has been rejected in the construction of a building, it is quite suitable for the scaffolding. Such is fibrine.