

detail, such as the white light in an eye, a stray lock of hair, &c., break off a small piece of the "crayon tendre," and use the sharp edge. Good pastels will stand chipping without crumbling into powder—that is the sign of an inferior quality.

With pastels the texture of children's golden hair and the bloom of their rosy cheeks can be most successfully imitated. In order to paint animals well, some idea must first be gained of the anatomical structure of the animal you wish to represent. In a horse, every muscle must be shown in its proper position. When painting the skin, remember to work with the grain—that is to say, in the direction the hair grows naturally—and to place the high lights on the most rounded parts of the body, such as the hind quarters, arch of the neck, &c. When painting the portrait of any particular horse or dog, keep your background subdued in harmonious softly blended tints, so that nothing attracts the eye from the main object of the picture—no figure in the landscape, or anything of that sort. When depicting a Skye terrier, bear in mind that its hair is quite different from that of the Fox terrier or Pointer. The former animal has a rough wiry coat, which must be rendered by sharp spirited strokes; whereas the two latter have skins more resembling that of the horse, with a soft sheen on the more prominent muscles. Pay great attention to the drawing and colouring of the eye; on that, the nostrils, and the ears, depends the expression of an animal's face, which is as capable of expressing fear, anger, pleasure, or pain, as that of a human being; observe the difference in a horse's face in anger. The

ears are laid flat on the neck, the whites of the eyes are shown, the nostrils distended, and the lips drawn back from the teeth. For a beginner it is well to choose some bold subject, which will depend more upon good broad touches and judicious colouring than upon minuteness of detail. This can be studied later on, when greater freedom in the manipulation of the crayons has been acquired. A lion's head, or a tiger's, with a dark rich background will make a good sketch. A bison's head also, with light background to throw up the masses of black hair, will be effective.

Landscapes in pastels look particularly pretty. The distance can be made beautifully soft and hazy; but trees, unless very carefully drawn, are apt to look woolly. Water can be rendered with great transparency.

Of flowers and fruit I have seen charming studies by French lady artists. The bloom on plums, peaches, and grapes, was wonderfully true to nature, without the laborious "stippling" necessary in water-colours.

A few words as to frames. For animal and dark figure subjects in the style of the old masters, a handsome rather massive gilt frame is the best calculated to show your picture off; but for landscapes, lightly sketched portraits, flower-pieces, &c., a white mount with narrow gilt moulding looks best.

It is to be hoped we shall soon see many paintings in this charming medium decorating our homes; for to any lady with a knowledge of drawing, and a true sentiment for colour, the art of pastel-painting presents no difficulties.

PLAIN ADVICE TO BRAIN-WORKERS.

BY A FAMILY DOCTOR.



IN attempting to give a few words of plain and homely advice to brain-workers, I am really addressing a larger section of my readers than might at first be supposed. With an ever-increasing population, a gradual rise in the price to be paid for the bare necessities of life, and a consequent lessening of the value of money, the struggle for existence—in this country—is indeed a hard one, and becoming apparently year by year still more hard. In some measure, however, the fault is our own. We are not a contented

race, we seem constantly to forget the fact that a contented mind conduces to longevity. We are unwilling

to begin as our fathers began, in order to end as our fathers ended. The march is ever onward, the cry for ever "forward." Hence we harass our brains, weaken both heart and nerves, and thus age ourselves in the race for wealth or position, which very often we cannot enjoy when we obtain. It is often said, and with a great deal of truth too, that the abuse of vinous stimulants helps to fill our lunatic asylums; but the excitement inseparable from many forms of business, sends its thousands annually to fill the dreary cells and wards of those institutions; and it is sad to think that some of our most hard-working and successful men fall victims, at the very prime of their lives and height of their ambition, to some obscure form of brain-disease. So much for the wear-and-tear of life at the present day.

Now, before going on to mention any of the more common affections to which the brain is liable, let me say a word or two about the organ itself and the nervous system generally. The brain is situated within the skull, and is surrounded by and rests upon

several membranes, which not only give it support mechanically, but feed it and supply it with nutrition, in the shape of oxygenised blood. The spinal cord is, so to speak, a continuation of the neurine or brain-matter; from the two proceed the nerves of voluntary motion and sensation, in the brain residing the ruling and guiding power that controls all our actions, and in it too the powers of intelligence, will, and emotion.

It is in the grey matter of the brain that nervous force is said to originate. This, when in a state of health, contains nerve-cells in abundance, and it is in it that impressions from without are stored up, considered, and acted upon; it is the seat of memory and of will. From it there branch off to every part of the body, the nerves of sensation and voluntary motion. Connected with the brain and spinal cord is another set of nerves; this is called the sympathetic or ganglionic system, because it consists of a series of knots or *ganglia*, placed on each side of the spinal cord, but joined to each other and to the brain by nervous filaments, &c. This system supplies branches to the heart, the lungs, and the internal viscera generally, these branches governing the motions of the organs to which they are supplied; they are called, therefore, the nerves of involuntary motion. Over them we have no control of mind, they act independently of all thought; the heart goes on beating, and the lungs breathing, even when we are fast asleep. But this we must remember, viz., that there is an intimate connection between even these nerves and the brain itself; so much do they act and re-act on each other, that the one cannot be affected for good or ill without the other participating. We cannot be happy or feel well unless the brain is in a healthy condition, and wholesome impressions supplied through lungs, or liver, or skin, contribute to happiness. The nerves are toned and braced up by pure air, fresh water, and healthful exercise, and through the nerves *the brain and mind*; while, on the other hand, every pleasant sight, or sound, or impression tends to calm and soothe the involuntary nervous system, and regulate the flow of the secretions over which they preside. As, too, these secretions are used in the animal economy to change the food we eat into healthy life-giving blood, we cannot wonder that quiet, freedom from care, and cheerful society should tend to increase the appetite, or the reverse of these conditions serve to check it entirely. We are fearfully and wonderfully made, and, although there be wheels within wheels in man's mechanism—wheels that for convenience sake we talk about as different systems, yet so intimate is the union between them that one cannot ail in the slightest without, to some extent, all the others ailing too.

To do its work well, the brain needs to be supplied with the purest and most healthy of blood—blood that has been well oxygenised by the breathing of pure air—the only natural stimulant—blood that is rich in the products needed to build up wasted tissue, and blood that is free from contamination with either bile from the liver, or urea from the kidney, or any of

the many drugs used as stimulants. But the brain needs something else to keep it in a state of health and comfort, it needs periods of complete rest, and people who cannot obtain such mental refreshment without artificial means are, to put it plainly, burning the candle at both ends; they are living on the capital instead of the interest, and assuredly shortening their lives.

The human frame, after all, *is* but a machine; yet, strange to say, many people expect to do with this machine what they never would dream of doing with any other. They know very well that the more wear-and-tear they take out of a mill, for instance, the shorter time it will last, and the more liable it will be to a sudden break-down, but seldom suspect that the same law holds good with regard to their own bodies. Old age and natural decay come, alas! soon enough to us all, but pitiable indeed is the plight of that man who, through o'erweening ambition, and cerebral excitement caused by business, finds himself breaking down long before the *dies naturæ* should have arrived, and the more pitiable still if he happens to have others depending on his exertions for, mayhap, the necessities of life and comfort. When we possess a very valuable and probably delicate mechanical instrument, are we not exceedingly careful of it? do we not clean it and dust it, and put it back carefully and tenderly into its case after we have used it? We do, and yet our lives are more valuable than anything else, but how carelessly we live! Were sudden death itself at an early age the only penalty we rendered ourselves liable to, from over-exertion of the brain, we might be excused for working away and taking our chance, as the saying is; but it is not, for, apart from the more painful inflammations, abscesses, and apoplexies which the brain and its membranes are subject to, apart even from insanity itself, there are many other dreadful ailments to which those who abuse their brains are peculiarly liable, and which are really worse than death. It is with the view of warning, not alarming any of my readers, that I here mention the symptoms of one or two of these.

Chronic inflammation of the brain, for example, although often a sequel of the more acute disease, may come on insidiously, especially in those who are in the habit of poisoning their blood by the abuse of stimulants. Among the first symptoms of this disease, may be noted a feeling of fulness about the head, perhaps not amounting to actual pain, the appetite fails, there will be constipation and dyspeptic symptoms, and as far as the mind is concerned either great depression of spirits, or just the reverse, unusual excitement. There are at the same time nervousness and often a strange hesitancy in speech, not probably amounting to positive stammering, but sufficient nevertheless to be noticed by friends or acquaintances.

Headaches may now come to further afflict the patient, the senses of sight, hearing, and smell become affected, there are distressing noises in the ears, the memory gradually fails, and one day paralysis comes

on, and the health entirely failing, death from exhaustion is the final result. Of the treatment of such a case I will presently speak.

We are all familiar with the term "congestion of the brain," most men of business are at all events, and most hard-working writers. For a long time the members of my profession had an idea that the amount of blood in the brain never increased to any great extent, that the blood-vessels could be full but never over-full. We know now, however, from experiment that this was a mistaken notion, and that the arteries and veins may be so over-charged with blood as to exert a very deleterious pressure on the brain-matter. That kind of headache which some speakers, clergymen, or actors suffer from after their official duties may be cited as a temporary form of congestion. Rest in the recumbent position, a little sal volatile, and subsequent sleep are usually all that is required to remove it. But long-continued congestion of the brain, or daily-recurring congestion, whether produced by hard work, worry, or the abuse of stimulants, can hardly take place without evil consequences. One of these is called œdema, or dropsy of the brain. The turgid veins exude the watery portion of their contents, with this the brain-matter becomes infiltrated, and, very gradually perhaps, the sufferer begins to feel that he is not the man he formerly was; he becomes drowsy and inactive during the day, is subject to fits of somnolency, which he tries to throw off but in vain, his appetite is capricious, his pulse often irregular, he suffers from depression of spirits, the intellectual powers become dulled and memory fails, and if apoplexy does not carry him off soon, his general health breaks up, muscular weakness comes on, and he dies, very gradually perhaps, but surely.

In softening of the brain, there is usually at first much depression of spirits, amounting even to gloom; a veil of crape seems thrown over the brain, through which the soul can hardly see, there are severe pains in the head, eyesight and hearing become impaired, and so does the memory, and the mind is often strangely emotional, the sufferer being easily affected to tears upon the least excitement, or on hearing and reading tales of distress. Sometimes in a case of this kind there is a tendency to stupor or somnolency after eating, and we should also expect to find the muscular system interfered with, the pressure of

lying on one limb bringing on pricking sensations and numbness. Sleep, too, is often rendered impossible either by the pains in the head, or by severe cramps in the limbs, or in the chest, or sides. I do not mean to say that any one or more of these symptoms are decidedly diagnostic, but collectively they tell their tale, and they each and all point to nervousness and brain-mischief. And they often lead on to worse, for the patient may die suddenly of apoplexy, or paralysis with its attendant evils may come on. And than this latter disease there are few more terrible to a sensitive and formerly active man; to be suddenly deprived of the power of motion, to be unable to help himself in any way, or even make himself understood to his attendants, is a state of affairs very painful to contemplate. Now, as regards the treatment of cases brought on by over-taxing the brain, it simply resolves itself into combating symptoms as they arise, careful regulation of the bowels, the giving up of habits and even duties that tend to excite the brain or weaken the body, and the support of the system by a carefully regulated and restricted diet; and I may add to these the exhibition of mild tonics, and change of air and scene. Without such a course, the brain-worker should remember that when once he feels a tendency to break down, he will only, *can* only, go on from bad to worse, until there stalks into his presence—the inevitable. This short paper will not be read in vain if I but succeed in convincing even one busy-brained individual that honour and fame and wealth are dearly bought at the price which, alas! is but too frequently paid for them. A fair amount of intellectual employment is conducive to health and happiness—we have only to point to many of our aged but energetic members of Parliament to prove this; but for one man who keeps brain-work within the bounds of prudence, there are a thousand who literally "die in harness."

Let me conclude by saying just one word to a class of men of the City with whom I often come into contact. Hard workers they are doubtless, and wealth-worshippers withal, but many of them never rise refreshed, seldom feel "themselves" in the forenoon, brighten up towards the close of the day, are all right at dinner-time, and over the walnuts and wine—why, they never felt better in their lives. The one word is this—BEWARE!

