

And so after a time we got down from our perch and went in.

There was no immediate call upon our fortitude and forbearance; Miss Reed sat working beside her mother's sofa, and looked up with a pleasant inquiry about our success. The professor was sorting dead butterflies under the lamp, and never looked up at all. We were not to be admitted into their confidence, that evening at any rate. Nor for many after-evenings, and as the days slipped by, we could almost have fancied that minute under the pines had been a mistake—almost, except for the light on the professor's face, and the increased tenderness he extended to all the living, creeping things that crossed his path.

We went out as usual, the four of us; for Tom and I were not too proud to skulk in their shadow, to listen to the professor, and under the spell of his eloquence we were fast beginning to regard our own superior stature and physique with a kind of scorn, seeing how entirely he was lifted above all consideration of such outward details.

The first of June: the summer had come at last, and on the morrow our little quartette was to break up, and two of us set our faces southward again.

There was one distant hill we had never climbed, and with one accord it was agreed to spend this last evening on the top. It was a longer walk than we had quite counted upon, and half-way up we halted to rest on the edge of an old disused stone-quarry. The sight of the rocky strata roused all the professor's enthusiasm; standing on a boulder, his little, worn, happy face turned to the setting sun, he was holding forth in no measured terms on the character and formation of the granite.

He broke off in the midst of it to watch a great brown bee that had tumbled into a tiny pool on a ledge of rock just below. We watched him with amused attention as he leaned over and stretched out the palm of his hand for it to cling to, and then—something gave way, and he was gone!

He was lying on a mossy slab when we went groping

in; and Mary Reed knelt down with one great sob and took his head on her arm. It was a sorrowful little procession back in the darkening twilight; we carried him between us, hardly sure if the busy, active brain were not silenced for ever. Clapsed tightly between his fingers, as we laid him down in his own room, we saw the crushed brown bee.

But he did not die; there was a week of anxious suspense and then all danger was left behind. "There will always be a slight limp," the big surgeon who came down from Carlisle told us, "but at his age that is not of serious consequence."

"Of no consequence except to himself," Miss Reed amended proudly.

"No," put in Tom; "if the professor lost every one of his limbs, he would be himself still, and above us all."

We went into his room to say good-bye a day or two after; our presence was not essential to his recovery, and there was no need for us to remain any longer.

"Good-bye," he said cheerfully, holding out a thin brown hand; "notwithstanding all our blunders and disasters it has been a blessed time. Haven't you guessed, either of you, how much I have found here?"

"Yes," answered Tom very gruffly, "we did guess, and nobody's gladder than I—we both are about it."

"Ah!" loftily remarked the professor, settling his head on another corner of his pillow, "you are much too young to understand anything about such matters; in another ten years or so you will be better able to appreciate the difference that makes in a man's life."

"No doubt," was the grim response; "good-bye."

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Only a passing acquaintance. We see the professor's name as lecturer occasionally in the morning papers, with half the letters of the alphabet attached; once or twice we have caught a glimpse of Mrs. Blake's fair face in the distance; but when Tom and I talk of our bygone adventures and mishaps, we keep silence always about that.

## ON NIGHT-WORK AND LONG HOURS.

BY A FAMILY DOCTOR.



HE tendency of life—using the word in the very broadest sense—is an upward one. At all events, that is my hopeful view of it. I speak as a physician, and should be sorry indeed to trespass an inch on the sacred province of preacher; but I humbly opine that man is naturally

inclined to seek the light, just as trees and shrubs grow towards the sunshine—to seek the light and to seek the good, even although he be burdened with sin, and entangled in a web of adverse circumstances. Man *must* advance, retro-

gression with him is impossible, he never could again become a savage; and, though thrown upon a desert island, with but few resources, he would only commence at once to better his condition, and make the very best he could of life. Even for this world, gloomy and tearful though we oftentimes find it, there is a glorious future in store, when knowledge shall be universal, and good triumph over evil. "Life is a jest," says Gay; verily this poet is wrong, for life is "real" and very "earnest." "Life," says Shakespere, "is as tedious as a twice-told tale." All upward paths are, to a certain extent, tedious, but there are many sweet resting-places even in life's journey, and none the less sweet are they in that we have had to

toil to find them. We hear a deal about the mystery of pain; what if, after all, pain were put into this world to help and not to hinder man in his upward way? We do much to avert it, we even live better and more regular lives to keep it at bay, and by so doing not only benefit ourselves individually, but brighten the pathway of those around us. It is the earnest desire, I believe, of every one of us to lead happy lives, and to die painless deaths; and it is, alas! only too frequently the fault of the individual himself that these wishes are not realised. The lives of those who have studied the economy of nature, and obeyed her simple laws, are eloquent in the extreme, and their deaths none the less so. And the lesson to be learned from them may be embodied in a few words: "As ye live, so shall ye die." I could bring before the reader hundreds of instances of people who have lived to a goodly old age without ache or ill, and passed away quietly at last, but I know of no case of an individual who has willingly and wantonly trespassed against nature's laws without suffering from it in this life.

Now my readers know well the kind of intemperance I am always trying in words to condemn. There are a thousand different ways of being intemperate, besides in eating or drinking too much, and each one of them leads to eventual pain, and shortens life. One may be intemperate, and sadly so, in his pleasures, innocent enough though they may be; intemperate in his studies, in his writing or reading, or even talking, to say nothing of his passions; or intemperate in the use of medicine, which can kill as well as cure, or even in the use of what taken judiciously tends to invigorate the system and cheer the mind, such as the bath, or exercise. As to the latter, many a man has killed himself by trying to ride or walk off some little illness which it needed but rest alone to cure. The well-to-do or wealthy in the world are the most likely to be intemperate in the pursuit of pleasure; those who have to struggle for the existence of themselves and their families, to be intemperate in their hours of labour. And intemperance in this respect assuredly means a waste of health—the only property that a poor man possesses. Many people, indeed—to use a homely saying—kill themselves in order to make a living. Long hours of labour are detrimental to the health, even when the work is carried on by daylight, but ten times more hurtful and deadly is night-work. There are those who must carry on their work at night, and those who need not do so; in this paper I address myself to both; the evils that accrue from the habit are the same in either case, and if knowledge is power, it will do both classes good to have them pointed out to them.

First and foremost, then, long hours of night-work are injurious to the health from the loss of wholesome sleep which they entail. Sleep, we all know, is food to the nerves; in other words, it is only during sleep that the nerves can rest and readjust the balance of their functions, disturbed by the wear-and-tear of waking hours. If this balance be lost—and lost it is in the long run even by the strongest who sin against

nature's law as regards sleep—a very distressing condition of the whole system is the inevitable result, a condition which may be cured by complete rest and relaxation, and a return to more regular and consistent habits of life, but which ends only too often in premature old age and early death. Professional men, literary men, artists and students, are very frequently the victims of nervous exhaustion, produced through the evil habit of turning night into day. For I maintain that good and health-giving sleep can only be obtained during the silent hours of the night. It may be averred, however, that the very best brain-work can also be performed at night. I doubt it, for the body of a healthy man is always more fresh in the morning, and his mind more light and cheerful, he is then in the best state to do good work without extra wear-and-tear of brain and nervous tissue.

There is no disease so insidious, nor when fully developed so difficult to cure, as that species of nervous degeneration or exhaustion produced by night-work and long hours. It is easy to understand how such a state of prostration may be induced. The brain and the nervous system have been very aptly compared to a galvanic battery, in constant use to provide a supply of electric fluid for consumption within a given time. "As long," says a recent writer, "as supply and demand are fairly balanced, the functions which owe their regular and correct working to the fluid are carried on with precision; but when, by fitful and excessive demands carried far beyond the means of supply, the balance is not only lost, but the machine itself is overstrained and injured, disorder at first and disease afterwards are the result. This illustrates pretty clearly the condition of a well-balanced brain and nervous system, supplying without an effort all the nervous force required in the operations of the mind and body, so long as its work is in proportion to its powers; but if embarrassed by excessive demands, feebly and fitfully endeavouring to carry on those mental and physical operations over which it formerly presided without an effort."

The symptoms of nervous prostration are exceedingly painful; we can afford to pity even the man of pleasure, who has by his own foolish conduct induced them, but much more so the brain-worker, who has been burning the midnight oil in the honest endeavour to support himself, and probably a wife and family, with respectability in life. He has made a mistake for which we can readily forgive him. In the pleasurable excitement of honest toil, he has forgotten that the supply of work cannot be regulated by the demand or need for it, but by the power to produce it. He has been living on his capital as well as the interest thereof, and when he finds the former failing, when he finds he has no longer the strength to work as he used to do, and starvation itself probably staring him in the face if he ceases to toil, why, the very thought of coming collapse tends only to hasten the catastrophe, and reason itself may totter and fall before the continued mental strain.

To give the symptoms in detail of nervous prostration produced by long hours of laborious brain-

work, would be a task space would not permit me to complete. Probably the first sign of failing nervous energy is given by some of the large organs of the body; it may be functional derangement of the heart, with fluttering or palpitation, or intermittent pulse, and shortness of breath in ascending stairs or walking quickly. The stomach may give timely warning, and a distaste for food, or loss of appetite, with acidity, flatulence, and irregularity of the bowels, may point to loss of vitality from waste unrepaired. Or brain symptoms may point out to the patient that things are going wrong. He may not find himself able to work with his usual life and activity; he may have fits of drowsiness, or transient attacks of giddiness, or pain, or heaviness, or loss of sleep itself. This latter would be a very serious symptom indeed, for in sleep not only are the muscular and nervous tissues restored and strengthened, but there is for the time being a cessation of waste itself; and if sleep be essential to the ordinary healthy man, it is much more so to him whose mental faculties have been over-tasked. Long hours and night-work lead to loss of sleep, and loss of sleep may lead to insanity and death.

Loss of memory, whether transient or general, is a sure sign that the brain has lost its power of healthy action, and needs rest and nutrition to restore it. Irritability of temper, and fits of melancholy, both point in the same direction, to an exhausted nervous system. Now I may safely say that there are very many thousands of brain-workers in these islands who are suffering, sadly and it may be silently suffering, from the effects of excessive toil and over mental strain. To warn such that they are positively shortening their lives, and that they cannot have even the faintest hopes of reaching anything like old age, is only to perform part of my duty as medical adviser. I should try to point out some remedy for the evil. To bid them cease to work would, in a great many cases, be equivalent to telling them to cease to live. They must work, or they cannot eat. Well, but there is one thing that all can do, they can review, remodel, and regulate their mode and system of living.

I will give the reader a short history of two cases which occurred in my experience within the last two years. I could give many such, but these, I think, will serve every necessary purpose. The symptoms in both were induced by night-work and long hours of labour. The first patient I shall call A. B., aged thirty-nine, a journalist by profession, but living in the suburbs, so that he suffered from no lack of fresh air.

"Hallo!" I said to him one morning, as I met him hurrying along L—Lane, as if walking for a wager. "You're out early for *you*; why, it isn't much past eight o'clock."

He looked haggard, harassed, and badly-done-by, as one might say, and somewhat peevish withal; and in stating his case to me, which he did with some reluctance, I could see he was trying to put the best side of it foremost.

"I'm doing a constitutional, doctor," he said, with an attempt at a smile; "my work has been worrying me of late, and I can't sleep so well at night. I think

walking takes the blood away from the head, and stirs the liver up. Doesn't it?"

"I don't think there is much the matter with your liver," I replied; "you don't smoke or drink."

"I do more than I ought to of each," he said. "I take a little spirits to force me to work when I feel fagged, and I smoke to soothe my brain."

By gentle pressure I wormed all A. B.'s symptoms out of him; and, the ice once broken, it seemed a relief to him to talk about his case. His whole life was a burden and a worry to him; he had no pleasure in the work that used to be but a pastime; he was dyspeptic and irritable, and gloomy and depressed. He knew rest would do him good, but he couldn't afford it. He stared incredulously when I told him he could not go on at this rate, that two years more of a miserable life would be about all he could expect.

"Do you think," he asked, "my case is so very serious?"

"I know it," I replied.

"I would do anything to get well," he said, "and to *feel* as I used to."

I got A. B. to take a fortnight's partial rest—a holiday was out of the question—at a bracing sea-side watering-place. I got him to abjure night-work, to eat regularly, but *sparingly*, of nutritious easily-digested food, to take *moderate* exercise, and a tepid bath twice a week, and to be as much as possible in the fresh air; to give up stimulants, using the extract of malt instead, and to smoke as little as possible. Giving up the night-work was the hardest part of the treatment. But he is well now, and works by day. He makes more money, and makes it more easily now than when slaving by night. But he has learned the true value of time, and how to economise it.

The case of C. D. is similar, but had a sad ending. He was forty-five years of age, a story-writer and reviewer; did his lighter work in the afternoons, reserving his heavy till after ten p.m., when he toiled till two or three in the morning. Drank only claret, but *far* too much of that. Was not a breakfast-eater; how could he be? Was never "in form" for any kind of work till two or three p.m. Could not convince himself that his system of work and living was injurious till a plague-spot appeared in his ankle. Oh! only a little swelling without discolouration, a swelling that *pitted* on *pressure*. It told a tale, though; and nine months after, C. D. was dead—dilatation and subsequent rupture of the heart.

But night-work and long hours affect not only the brain-workers, but a far larger class, and one that, alas! cannot help itself; I allude to needlewomen, &c. &c., a class that I pity if I cannot help. It is sad to think that thousands upon thousands are annually hurried to their graves, through consumption and other incurable diseases, engendered by their being compelled to work through long hours of the night in badly-drained and worse-ventilated apartments, often underground, often exposed to wet and draughts, and nearly always having to breathe air polluted with smells that would tend to breed fever even in the most healthy and well-fed.