

## Breathe Easier

BY W. P. KNOWLES

THE NEXT TIME you have something heavy to lift — whether it be a large pot of soup, a typewriter, or a suitcase — try lifting it first without any change in your breathing. Then take a full, deep breath and hold the breath while you lift. Much of the weight oddly disappears. Where it goes nobody knows, but the effect is like picking up a box expecting it to be full, only to find that it is empty.

This lightness given to an object by the mere change in the way we breathe illustrates the mysterious aid that comes from a conscious and calculated use of breathing. Those who have played the game of levitation (and who hasn't?) have enjoyed the same sensation: that of finding that a person or a table can be hoisted by the mere finger action of a group if all present breathe deeply and simultaneously as they lift.

By some attention to breath control, if at first it be only as a stunt or as a parlor game, we get a glimpse of how much of an ally proper breathing can be in the daily grind. Merely because breathing is unconscious and automatic, we assume that we do it properly and can leave it to nature. No assumption could be more subtly removed from the facts.

Normally we do breathe without apparent effort—16 times a minute, 960 times an hour, 23,040 times a day. But circumstances change the way we breathe. A sudden shock, a flash of panic, or a finger touched to a hot stove—any of these will change the rhythm of our breathing sharply, make us gasp or for an instant stop breathing altogether.

By the same token, thoughtful management of breath, a suitable engineering and husbanding of it, can stand us in practical daily aid, tone us up and contribute visibly to our health and vitality.

The truth of this I learned from experience. Years ago a doctor told me I had been starving my lungs. "You need more oxygen," he said. "Your posture prevents your breathing properly. I will show you how to correct this."

The prospect bored me, for who

A CONTRACTOR

has not suffered all his life from the endeavors of well-meaning people who seek to correct his posture?

But I discovered that the effect of good posture could be achieved without painful contortions. The average person goes around with his shoulder blades nine inches apart. By drawing the blades together until they are only two inches apart, he accomplishes the incidental result of squaring his shoulders enough to suit anyone but a top sergeant. And he accomplishes far more: he takes the weight of the chest off the lungs. When the shoulder blades are wide apart he uses his breathing to lift the weight of his chest and to push out his ribs. With the shoulder blades drawn together, he relieves his lungs of their unnecessary freight and leaves them free and unencumbered for their essential function, which is to send oxygen to the blood.

Later, in World War I, this experience came to my rescue in an unusual way. Severely wounded, gassed, my right hand shot off, and without my speech as a result of shock, I found myself a hopeless case in the hospital. But somehow I realized that even on a hospital cot, it was possible for me to press my shoulder blades together and ease the pressure on my lungs, a matter of vital importance then. After months of slow, self-conscious recovery, I was finally released, although I still weighed only 82pounds.

Recently I had a complete medi-

cal examination, at 61, after which the doctor grinned, "If everybody were in as good health as you, we doctors would be out of work."

THE BENEFITS of the intelligent use of breath can be confirmed by anybody anywhere. There is no need for case studies or statistics or appeal to authority. Once a person grasps the idea of correct breathing, he is free to find his own confirmation and use the rewards in a dozen different ways.

Lifting something heavy is only one dramatic instance among many. Even in a day of escalators and elevators, there are still stairs to climb usually by puffing and blowing and panting and some recovery at the top. But try this: as you climb the first two steps, keeping the shoulder blades in position, breathe in. On the next two, breathe out. With a rhythm of two in and two out, two in and two out, you can glide up flights of stairs and arrive at the top without gasping for breath or panting like a collie just back from chasing an imaginary rabbit.

What happens is this: when we climb, we create a surplus of carbon dioxide and we make no provision for the intake of extra oxygen. The nervous system does not respond automatically to the added requirements, and if we leave the problem to our nerves, we lose control temporarily of our breathing. By quickening the breath rhythmically as

we climb, we expel a greater amount of carbon dioxide and take in a

greater supply of oxygen.

The principle can be illustrated and confirmed further if we shorten our rhythm when we walk up a hill or long slope. In this case, breathe in while you take three paces and breathe out as you take the next three — three in, three out, keeping the shoulder blades in position. A hill that leaves you clutching for your breath if you do not change your rhythm can be easily accomplished by this simple change in breathing tempo.

Or if you prefer to climb hills and stairs without the right alteration in your breathing and arrive at the top out of breath, as the saying goes, there is a simple way to get your breath back. Breathe a little faster. Go ahead and pant like a dog. Keep this up for, say, half a minute, then take a couple of full easy breaths. Again pant for 30 seconds and finish with a few full breaths. By now you will have quieted your breathing to normal.

When a runner gets what we call his second wind it means that, at a certain point, he has unconsciously assessed his increased needs and countered the quicker accumulation of carbon dioxide by a deeper and more reliable intake of oxygen.

In the heat of summer there is another breathing device that will bring confirmation and relief at the same time. Suppose it is a

warm day and you are busy and flushed in the kitchen, trying to get a meal ready against time, or you are in the garden trying to get a bed weeded before the weeds grow back again. You are literally hot and bothered. Place the back teeth together — don't grind them — and hiss out the breath through the teeth. Breathe in through the nose and out again through the closed teeth. No matter how hot you may have been, you will cool off after a dozen breaths. Oddly, the cooling sensation spreads all through the body as if it came from a breeze.

By the same token and by somewhat the same practice, directed breathing can offset thirst. When you are thirsty on a walk or hike (and most of us perversely get thirsty when we get away from water), place your upper teeth out beyond the lower teeth, draw in a full breath through the teeth but exhale through the open mouth. Repeat this a few times and you'll forget your thirst.

To support the value of this advice, General Lumsden, whose tank corps under Montgomery played such an active part in the desert battle of El Alamein, wrote me: "The tip about thirst greatly helped me and my men. Without constant resort to the rhythmical breathing you taught me, I could not have withstood the stresses and strains during the fighting half so successfully. It revives one physically in an amazing way."

One of the most alluring arguments for the proper control of breathing is that it practically does away with the need for exercise. The main reason for exercise is that it makes us change our rhythm of breathing and thereby get more oxygen into our lungs to pass along to the blood. If we will breathe shrewdly, exercise becomes incidental.

I proved this with some satisfaction during the late war when I was asked to suggest a series of exercises for early morning use by the Royal Air Force. Hangars were cold; the mess hall was cold; fuel was short. The best thing was to warm up the men. I countered with the suggestion that breathing would do the trick, and I prescribed the following routine: the men were to inhale and exhale through the nostrils, at first rapidly, then they were to lengthen the breath and to continue to alternate. First, quick short breathing for 30 seconds, then slow and full breathing for 30 seconds. In a few minutes the body glows with warmth.

With the sad majority of us there is really no call for great physical exertion these days. What we need is a sense of breathing that can help us at our desks or stoves or machines. Here again breathing can be put to the test.

Tenseness and even depression may be overcome by the following exercise: place the shoulder blades as nearly together as you can without strain, then breathe out gently and fully. Pause, then inhale with a full, slow, gentle breath until you feel that the lungs are comfortably full. Breathe out slowly through the nose with a long sigh and without altering the position of the shoulder blades. Do this a dozen times and your depression should disappear like the morning mist. Why? Because you have stimulated and inspired your brain and eased the nerve tension with a fuller supply of life-giving oxygen.

In what is commonly known as "stage fright," a person often seems to suffer from a mild form of suffocation. Actors learn the benefits of deliberate breath control. Any of us can profit from the actor's practice of stopping in the wings and fortifying himself with several full breaths before entering a scene.

In the strained circumstances of modern life, automatic breathing is not sufficient for our needs. Sedentary or monotonous work habits call for new and consciously controlled rhythms. Breath control adequate to meet the demands of modern life can be achieved only by study and practice — sustained and disciplined exercises carried on until better breathing becomes a habit.

At least it will pay us to test daily some of the suggestions I have offered here. This test will keep us sensitive to the problem, hospitable to further learning. And it will demonstrate in the clinic of experience the constructive use we can make of a power we now overlook.

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## WHAT HAPPENED TO THE \$30,000

Just before the turn of the century, there developed in Washington a mystery concerning a Librarian of Congress and \$30,000 in copyright fees which he seemed to have mislaid.

Ainsworth Rand Spofford was a man of such unquestioned integrity that no one ever intimated that he might have spent it, although it was generally admitted that he was an extremely absent-minded man. He could not remember what he had done with it and no one else had handled it.

Mr. Spofford was appointed Librarian of Congress in 1861, just 61 years after Congress had made the first small appropriation of \$5,000 "for a collection of books."

By 1895, the books had increased to 700,000, housed in the original cramped Library, now almost impossible to use properly, and administered by a staff that was obviously inadequate. In addition, a new copyright law required a fee for each

## By Blanche McKeown

copyrighted book, and this fee went to the Librarian of Congress, along with copies of the books. The man in charge of all this did not have a permanent secretary and was in the habit of opening his own mail and doing other clerical duties.

From time to time a check or money order would be unaccounted for, but it was not until 1895 that the situation came to official notice. In June of that year, President Cleveland notified the Librarian that an official Treasury check would be made on his finances. The Treasury reported in July, calling attention to a shortage of a little over \$30,000.

Mr. Spofford was bewildered. He did not know where the money had gone. The Treasury was bewildered too, but it was sure Mr. Spofford had not misappropriated it. And so,