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...CONTENTS...

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	PAGE
The Dry Friction Bath	By Bernarr Macfadden..... 98
Skating as an Exercise	By Arthur Y. Sarony.....103
Some Stage Favorites	By Frank La Pierre.....106
Muscle and Health for Boys.....	By Bernarr Macfadden.....110
Boys' Question Department.....	By Bernarr Macfadden.....111
After the Great Physical Culture Exhibition113
Feminine Ugliness Unveiled.....	By Mildred Goune.....121
Symptoms, Cause and Cure of Consumption.....	By Bernarr Macfadden.....124
Mormonism—A Monogamist's Reply	By H. Irving Hancock.....127
Question Department	By Bernarr Macfadden.....129
Raw Food Menus	By Amelia M. Calkins.....131
Dread of Motherhood.....	By Dr. A. Wilbur Jackson.....135
The "Missing Link"	By J. Walter Smithson.....137
The Germ Fallacy in Regard to Contagion.....	By M. J. Rodermund, M.D.....141
Developed into Strong Man by Deep Breathing143
The World's Greatest Scientist on Vaccination.....	Herbert Spencer.....144
Evils of the Tobacco Habit.....	By Mrs. Carry A. Nation.....146
A Movement to Annihilate the Cigarette Evil.....147
The Virtues of Our Methods Proven148
The Great White City (Poem).....	By H. Arthur Powell.....152
Hunted Down (Continued).....	By John R. Coryell.....153
Dawn of a New Era.....	By Bill Nye.....161
Miscellaneous Paragraphs from Everywhere.....162
A Mild-Mannered Boy	By Roland Russell.....169
The Diet of the Normal Man.....	By Dr. H. W. Wiley.....174
An Air Bath in Two Feet of Snow177
Cured of Typhoid Fever.....177
Scientific Medicine All Guesswork	By Alexander Marshall.....178
Editorial Department	By Bernarr Macfadden.....182

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THE DRY FRICTION BATH

HOW ONE CAN CLEANSE AND BEAUTIFY THE SKIN, MAKING IT AS SOFT AND SMOOTH AS VELVET, AND EXERCISE ALL THE MUSCLES OF THE BODY AT THE SAME TIME

By Bernarr Macfadden

Second article of a series for 1904, in which I shall attempt to meet the requirements of the large body of studious workers who have not the time to give much attention to their physical wants. In these articles I shall endeavor to set forth a simple mode of life that can be followed daily, and yet not interfere with the closest business demands, at the same time keeping the busy man in the highest degree of vital, muscular, functional and nervous vigor.

Grasp the towel as shown in the illustration, and pull it quickly back and forth over the neck and shoulders, rubbing from the upper part of the neck to the shoulders, on a level with the central portions of the upper arms. (Exercises the triceps muscle of the upper arms.)

IN a previous article I commented at considerable length on the advisability of a clean skin and a healthy condition of the thousands upon thousands of little pores that open out upon the surface of the body. On various occasions I have advised my readers to take dry friction baths, but until this issue no attempt has been made to give detailed instructions as to how this bath may be taken.

I intend that this article shall fill fully and thoroughly the need that may have been felt by my readers in their desire to comprehend more fully not only the methods of taking this bath, but the full advantages that will accrue from it.

It is nearly ten years since I had my attention first called to the benefits of a dry friction bath, or, to be more plain, friction of the skin with a dry towel or soft bristle brush. My attention was attracted first to this by a man in his sev-



Grasp the towel as shown in illustration, pulling it back and forth over the central portions of the back and shoulder as illustrated. Same exercise with position reversed. (Upper arm and shoulder.)



Pull the towel back and forth as shown in illustration, from the neck to the edge of shoulder. Same exercise with towel over left shoulder. (Exercises central back portion of upper arm.)



These two illustrations show the use of a towel, rubbing back and forth along the back, from immediately under the armpits clear down to the calves of the legs. In the preceding illustration is shown the beginning of the rubbing process. Rubbing with the towel back and forth, it should gradually come down to the thighs, as shown in illustration following, and then down to the calves. (Exercises shoulders, chest, biceps and back.)



enties. Knowing of my interest in physical culture, he called upon me for the purpose of discussing the value of this remedial agent. He did not appear to be a man of more than fifty or fifty-five, and though his face was not full and round, it had the healthy color of a well-nourished and well-kept body. He told me the story of his first experience with the friction bath, and I will reproduce it here, as nearly as I can remember it, in his own words:

"When I was about twenty years of age, I was given up to die from consumption. My physician, relatives and friends said they were sorry, but there was really no hope for me. Nothing more could be done; I had to die. Well, fortunately, I had a will of my own, and when they seemed so positive that there was no hope for recovery I made up my mind that I wouldn't die, and I began



Rubbing the arm. This illustrates method of rubbing the arm. Rub the forearm back and forth, and then straighten the arm and rub the upper arm. Rub all portions until the skin tingles from the friction. (Exercises triceps and biceps of upper arm.)

searching around for some method to bring about recovery. I didn't have the slightest idea as to what this method would be, but I was determined that I would find some means that would bring back health and strength.

"In searching for a cure, I somehow acquired the idea that the skin was the great eliminating organ of the body, and that I should do something to wake it up. The more I thought of this theory the more I became convinced of its truth, and finally I concluded to adopt some method of awakening the functional processes of the skin to greater activity.

"Well, I did not know what to do, and I may have started on a rather rough régime, but I went out and bought a horse brush!

"Remember, I was determined to get well. I took that horse brush home and tried to brush my delicate skin. You can imagine readily my headway in the

beginning. I could hardly touch my body with the stiff bristles of this brush, but somehow or other I had faith in this remedy. Day by day I was able to apply the brush a little more vigorously. My skin became accustomed finally to the rough treatment, and I spent several minutes each day in brushing my body all over with this rough brush.

"Well, I improved gradually at first. By the time I got so that I could use the horse brush vigorously I felt a great deal stronger, and it was not many months before I was a well man. I am satisfied that I cured myself of consumption with that horse brush."

This old man showed me the skin of his body in various parts, and it was as smooth and soft as velvet. It was the most emphatic exemplification of the benefits of the dry friction bath that I have had presented to me. It was a lesson of very great value. Here was a



Wrap the towel around one hand, as shown in the illustration, grasping it immediately below with the other hand. Now rub the chest upward and downward from the neck down, and also the abdomen. (Exercises shoulders and upper arms.)



Showing position to be assumed in rubbing the inside of the leg. Bring the towel back and forth over the leg at the extreme upper part of the inside upper leg; rub the leg down to the ankle. Same exercise with position reversed. (For muscles of the forward part of the shoulder and biceps of the upper arms.)

consumptive, given up to die by physicians and friends, who cured himself by this one means alone.

In order to be well and strong, not only must you have a clean skin, but you must have an active skin. You must be alive! The skin really breathes, absorbs oxygen and throws off impurities, just as do the lungs.

Note the difference between a horse that is curried and brushed daily and one that is given but little attention in this way. One looks sleek and fat and happy, if well fed, while the other usually appears to be in far from satisfactory condition. Nowhere is the value of this better recognized than in the United States cavalry. Many troop commanders insist upon grooming for three-quarters of an hour in the morning and the same length of time in the afternoon. When out on frontier scouting expeditions it was found invariably that the commander who insisted most rigorously on the grooming of the horses headed the most effective troop.

Well-groomed horses could stand anything that their riders could go through. It is this brushing, this currying of the horse's body, that has caused the difference.

The skin of many persons manifests but little activity. They wear very heavy clothing, the air rarely comes in contact with the skin, and circulation and the functional processes therefore are performed very poorly. The skin becomes rough and coarse, almost like sandpaper to the touch. A perfectly healthy skin is smooth and soft like satin, and in order to acquire and maintain the surface of the body in this condition not only is a proper diet essential, but dry friction baths of some kind must be regularly taken. Perfectly pure blood depends largely upon open and active pores. Many diseases can be avoided with an active skin to assist the depurating organs of the body.

The best time to take this friction bath is immediately on arising. If you take



Position to be assumed in rubbing the outer side of the leg. Bring towel back and forth, as shown in the illustration, rubbing the leg from the hips down to the ankle, on the outer side of the right leg. Same exercise with position reversed. (Exercises shoulders and chest.)



Showing how forward portion of the leg can be rubbed. Bring the towel back and forth, rubbing the forward part of the leg from the extreme upper part down to the ankle. Same exercise with the other leg. (For muscles of the back part of shoulder and back part of upper arm.)

any exercise it should follow the friction bath. The various ways of using the towel, which will enable one to thoroughly rub every part of the body, are illustrated in this article. The average individual will imagine that he can rub himself all over without instructions of this character, and no doubt, to a certain extent, this is true; but if the friction bath is taken as described herein, and its effects compared with the ordinary rubbing that is done without any definite knowledge of how to do it properly, one will learn very quickly the value of thoroughness.

Not only do the methods herein advised thoroughly awaken every part of the

exterior surface of the body, but they exercise nearly all the muscles of the arms, chest, and the back between the shoulders. In fact, if one will vigorously go through all these various motions, often he will be quite fatigued, or winded. The friction bath can be taken with the ordinary Turkish towel or with a friction towel. Care should be taken to secure good towels, as the cheap towels tear easily. Soft bristle brushes can be used, though one cannot secure quite as much exercise while using the brushes. It is advisable to follow this friction bath with a cold bath. The cold bath can be taken with a wet towel or wet sponge, or, if desired, one can immerse himself entirely in a tub.



Showing how the back part of the leg can be rubbed. Bring the towel back and forth, gradually allowing it to descend until it has reached the ankle. (For muscles of fore part of shoulder and biceps.)

“CORSET WAS!”

Will—“You heard about that woman who was so short of breath because she wasted it, didn’t you?”

Phil—“Yep.”

Will—“Did you hear about that

woman who had such an extremely small waist?”

Phil—“What was the cause of that? Because she waisted it?”

Will—“Course’t was.”

SKATING AS AN EXERCISE

By *Arthur Y. Sarony*

MEMBER OF THE NEW YORK ATHLETIC CLUB; FORMER HOLDER INDOOR RECORD OF TWO MIN. FIFTY-TWO SEC.; ONE-HALF MILE, ONE MIN. TWENTY FIVE SEC.

ICE skating, without question, is the greatest of all winter sports, and is indulged in by the middle-aged as well as by the young. Interest in this sport has been growing rapidly ever since it became recognized as a valuable, healthful means of physical culture. Skating brings into play every important muscle of the body, especially the muscles of the legs, the back and thighs, and with this splendid exercise there is also the advantage of the clear, crisp air breathed into the lungs.

It is a delightful, exhilarating pleasure that no one should miss in fine cold winter weather, and if I could give advice, I would urge

all who are seeking to attain a high degree of health to get all the skating they possibly can. There is nothing more delightful than to come home from an hour or more of skating, with an appetite as keen and ravenous as that of a wolf, and with ruddy, glowing cheeks and face. The best time to take the exercise is in

the afternoon, but when one cannot possibly do this, the night will do.

One of the most essential things is to get the right kind of skates; a thing that most people overlook. The kind most used nowadays is copied very much after the Norwegian skate, both in design and in workmanship, and is made of

aluminum and steel. It has great advantage over the old ice skate, which was made of a piece of heavy wood, slit in the middle with runner inserted, and covered with bulky straps. The lightness is another advantage of the present skate. It weighs, according to the length of the skate, from seven to ten ounces.



Arthur Yale Sarony, N. Y. A. C.

For pleasure, the best and most popular size is the fourteen-inch long blade, two inches high and one-sixteenth of an inch in width. For racing, of course, a longer blade is necessary, especially for out-of-doors. Another very necessary thing is to have the skates riveted to the shoes, for this gives a great deal more

comfort than having straps across the foot, since, in extremely cold weather, the straps interfere with the circulation of the blood. Then, again, a good snug-fitting shoe is a great support to the ankle.

I know of both men and women well along in the sixties who still skate almost as much as they did when in their twenties. To one who is proficient in the sport there is a certain fascination about skating that makes it hard to leave off. Few people believe that it is really more beneficial than bicycle riding, yet it is much more of a muscle developer, and is not half as tiresome. If one would measure the calf of his leg at the beginning of the season, and then at the end, he would see a difference that would surprise him. The same is true in regard to the thighs and the back. For anyone who is at all troubled with a weak back—and this is especially applicable to women—skating is a splendid means of strengthening it. While skating one should remember always to breathe through the nose.

Speed-skating is a sport that is also very popular with those who have served their apprenticeship. To a certain extent, we might almost say, it must be born in a person; yet there are innumerable cases where, through careful training, one has developed from a mere novice to a star in a very short space of time. To be a successful speed-skater, one should have certain qualities. One of these is the full control of the muscles of the legs, which can be acquired only by persistent exercises at home. The back plays also a very important part in

racing, as you are almost constantly in an inclining position. In the first part of the season the back feels this strain more than does any other part of the body, but this strain disappears gradually as more and more practice is had.

When training, remember to skate more than your distance, yet never extend yourself to your limit, as this is injurious. If your distance is one-half a mile, then skate a mile. If a mile, skate two miles, and so on; then when you come to skate your race, the distance will seem so much the shorter to you.

Another very important point to be remembered, in short distance races, is the start. Mr. McDonald, whose picture is shown herewith, is without doubt the fastest man of his mark skating to-day, either among amateurs or professionals. He skates under the colors of the New York Athletic Club, and is considered the fastest indoor sprinter in America, especially when skating in small rinks. His favorite distances are two hundred and twenty yards and one-quarter mile stretches. He holds last year's championship for the one-half mile distance. He darts away like a shot, and affects a peculiar stride resembling a run, that is very original and natural.

The racing indoors is just a trifle more hazardous than out-of-doors on account of the turns, but this rather adds to the sport since it makes it all the more exciting. Without some risk attached, it would lose much of its fascination.

The indoor stride is much shorter, and a trifle different in style, while the outdoor is a long swinging stride, and therefore you dwell much longer on each foot as you strike out. In skating indoors the sharp turns are the more difficult to master, and it requires con-



W. W. Swan, N. Y. A. C., Interscholastic Champion Swimmer, Skater and Bicyclist. Indoor Skating Champion, Greater New York

siderable practice to be able to acquire them at a high rate of speed. The style of skating wherein you lap one foot over the other, is known as "Grinding the Bar," and it is quite a tax on the ankles. Out-of-doors there is not so much of this done, since the tracks are generally from four to six laps, whereas in-

doors they vary from eight laps up to eighteen. There is also a certain knack about rink skating that one learns only from experience, and which is a great aid in the strokes and at the corners.

The stomach plays a very important part in speed-skating, just as it does in the exercise of swimming, and it must be kept therefore in perfect condition. Special attention should be given to dieting, and until the stomach is in first-class shape, one can never hope to become a successful speed-skater. The stomach is continually under a very heavy strain, on account of the leaning position.

Perhaps the best thing in training for skating is jumping the rope. I start in



Harry P. McDonald, N. Y. A. C., Indoor Champion U. S. and Canada, Half-mile, 1901. Quarter-mile Record Holder, 40 seconds

to start with. Rope jumping brings in to play the same muscles that skating does, and is one of the finest exercises that there is.

Of course, another very essential thing for any aspirant for racing honors is to keep good hours. You should have at least eight and one-half or even nine hours' sleep, if possible. On awakening in the morning devote about ten minutes to some simple exercises, and follow that by a cold shower or bath. Then have a brisk rub down with a rough towel until the skin assumes the pinkish hue that generally follows this exhilarating practice. I always eat a light breakfast, and walk to business each morning.

DEATH TO DISEASE LURKS IN THE BATH ROOM

To the Editor:

I want to say something about that article, "Death Lurks in the Bath Tub." I cannot agree with the author in one single point. I average from five to seven baths (cold) a week, and I am not dead yet. Before I began bathing so frequently I was affected with an eczema and itch on my legs for ten years that were torturous in the extreme. I had been before medical experts and specialists, taken thorough medical treatments and did everything they prescribed for me, until they gave me up as incurable. But, alas! for the doctors. One day a copy of PHYSICAL CULTURE found its way into my hands, and I read in it that persistent cold bathing would cure eczema. Eager to get relief, I began taking

cold baths with water taken from the cistern on the back porch in the open air, commencing in November, and I did not miss a night the whole winter through; kept it up during the summer, and when winter came again the eczema did not appear.

Yes, I think Dr. Robinson is right. Death does lurk in the bath tub, for it has killed my eczema, and more, my general health is very much better than it was before I began the baths. Listen! My doctors, who were treating me advised against so much bathing: just enough to keep decently clean. That copy of PHYSICAL CULTURE was worth \$100 in money and thousands in relief to me.

ELMER S. CAYLOR.

generally to do this exercise about six weeks previous to the racing season. At first I jump only about one hundred times, and gradually I increase each day until I get up to about seven hundred jumps. By the time I am ready to skate my legs, which I hold to be the principal thing, are in fair shape

SOME STAGE FAVORITES

(CONTINUED)

By Frederick La Pierre

MISS BLANCHE WALSH, who last season made a forceful impression as the "Daughter of Hamilcar," and who, through her fine proportions and musical utterance, saved that somewhat monotonous production from becoming too painfully classic and unreal, has made this season an altogether new and unlooked-for name for herself as an emotional actress in the much-tried and trying rôle of Tolstoi's "Resurrection" heroine.

It has been discovered and acknowledged by the critics that Miss Walsh has essayed and has attained a high pitch in psychological interpretation of character, and that from an artistic and æsthetic standpoint her work is at no time deficient. This is to be looked upon as a distinct triumph for the physical culture school of acting, and Blanche Walsh, as one of its principal exponents, deserves great credit for proving so conclusively that a fine physique and a healthy organism are not incompatible with the delicate gifts of artistic perception and high intuition.

Some people still cling to the exploded idea that an Irving figure or a Maude Adams delicacy of outline is necessary to the possession of innate refinement and soulful thought, coupled with that lightness of execution which marks the efforts of some of the world's great actors. This is being more conclusively proved every day to be nothing but a superstition about dramatic art that we now see everywhere refuted. Even the critics are waking up, and it is generally acknowledged by the best writers on theatrical topics that, although a man of attenuated frame and lacking vital force,



Chauncey Olcott, Who Always Manages to Look and Sing Delightfully

in everyday life may convince us of deep emotional capacity because of our intimacy of connection and nearness of view, yet on the stage, to be heroic and commanding, the actor must prove to us that he actually possesses in his own person that strength, virility, force, elasticity and warmth of feeling with which he would clothe his creation. And, if he be not so blessed, it is not to be wondered at that his audience remains cold and unresponsive.

Vast physical and nervous energy are needed on the stage as nowhere else, and they are so interdependent that it is almost impossible to conceive of the existence of one without the other. Nervous exhaustion and kindred evils mean merely the lack of sufficient vital force or

physical energy to support the constant drains by which the drama depletes its devotees. The constant rehearsing, the weary waiting in the wings for entrance cues, the stifling atmosphere of stuffy dressing-rooms, the late hours and ever-present anxiety and excitement, the quick changes from heavy to light costumes and the continual giving forth of the best of one's life-forces, vitality and personal magnetism; all these things stamp the stage as the most arduous field of occupation. A thorough repletion of nature's forces by a healthy and elastic organism alone will enable the actor to attain distinction or fame, without losing health or life in the effort.

This may sound severe, but it is true. Several horrible examples have come under my own observation. I remember vividly the case of an old character man who was a fairly good actor, and who still possessed at times a powerful voice, but who had to have his nerves braced with brandy or quieted by morphine. He could not sleep at night and generally spent the hours of darkness walking the streets and trying to invite repose through physical exhaustion. He claimed that the only time he was at all certain of sleep was for a couple of hours in the afternoon; and that if he was interrupted at this time by extra rehearsals, as sometimes was the case, he used to go nearly crazy. One day he overslept and his brain was so muddled that when he finally tumbled downstairs about 7.30 P. M. he was obliged to ask his

landlady: "What do I have to do?" He added: "I know there is something I have to do, but bless me if I can think of it." To this she replied: "Well, I don't know of anything except it is to go to the theater."

"That's what it is," he answered, and hurried away to his dressing-room. He was ready at the rise of the curtain, and, strange to say, took his part apparently as well as ever. But such constant strain and wear could not last, and the old man had to go home for a long-needed rest. He was a disciple of the old school and a victim of the pace that kills. He was a fairly good actor, a quick study, convincing in certain character rôles, but he had not taken

care of his health. When he was worn out he resorted to drugs and stimulants, and consequently he had to retire a physical wreck, penniless and dependent on others for the bare necessities of life. Such cases are not uncommon in a calling where forethought is often absent and

careless living and improvidence are frequently conspicuously present.

Yet, in contradiction to this, I remember many happy incidents. One was that of a young fellow, strong, self-reliant and ambitious, who undertook leading rôles, but whose youth, height and lack of experience handicapped him in the eyes of the manager and of the company. We heard such expressions as: "He has nerve, to attempt leads!"



Miss Blanche Walsh, Who Has Made an Altogether New and Unlooked-for Name for Herself as an Emotional Actress in the Trying Rôle of Tolstoi's "Resurrection" Heroine

"What we need most is a good leading man who knows his business!" "B—— is a nice fellow all right, but he is foolish to go out of his line." So it went on, but it turned out otherwise than we had expected. Three of the plays we put on were military dramas, and as B—— had been through the Cuban war his military training and manly bearing stood him in good stead. He was good-looking, soldierly and determined, and finally won out in spite of opposition, jealousy and detraction—things that all theatrical people must encounter.

Finally, in a prison escape scene, where he had to get over a wall eight feet high in double quick order, he brought down the house, and the curtain went up half a dozen times, but the two "supes" who were supposed to break his fall on the other side happened to mistake the right spot. Our leading man landed on his knee-cap with a sickening thud that made it necessary for the manager to call a doctor from the audience. Our actor suffered great pain, and his injuries kept him lame for a few days. The doctor said he broke something with a terrible Latin name, but it proved otherwise, for with cold bandages and a little care our actor recovered and went over the prison wall as blithely as ever, and he certainly owed his success to his strong, manly, military bearing and his athletic training.

Although deserted by Viola Allen, "The Eternal City" continues to be a spectacular wonder, and the handsome

Edward Morgan seems to have found another religious setting that displays his well-built figure and the grave tones of his orotund and resonant voice fully as well as, if not better than, "The Christian" or "Quo Vadis."

That merry little comedienne, Vesta Tilley, who so delights in wearing men's clothes, and who looks so dainty and feminine withal that we heartily forgive her dapper male impersonations, manages to look neat and attractive when a less clever artist would only succeed in being brazen, suggestive and presumptuous.

Her "Eton Boy" and several other of her singing specialties go to prove that gracefulness of carriage, agility and strength of limb, born of well-built muscles and judicious exercise, go a long way toward carrying one to the goal of success and popular regard. The "Only Algy" is alone in the one particular that she is never coarse or distressingly masculine, whatever she may aim to be as the "best



Vesta Tilley, Who So Delights in Wearing Men's Clothes

dressed man in town."

Chauncey Olcott always manages to look and sing delightfully. He is the only one who can make anything of his songs, which, nevertheless, he pipes in such a canary-like and sweetly melodious tone that one really wonders how such a woodland pipe can find its abode in so large and strong an individual. But Chauncey is full of surprises, and he is really and truly Irish, and his large following of real old Grecians can never see one flaw in his singing or acting.

After all, the homely atmosphere and good-heartedness that prevail in "Terence" and all the plays that he attempts are a decided relief when one has been surfeited with Clyde Fitch and Pinero confections to the point where a good brogue, an Irish Colleen and some sweet, laughing children, with songs and kisses carefully intermixed, are needed in order to take the taste of the other glaringly decorated sweetmeats out of one's mouth. The sight as well as



Edward Morgan, Who Seems To Have Found Another Religious Setting That Displays His Well-Built Figure

the taste of what is wholesome, natural and healthy will be always refreshing.

Olcott typifies what should be manliness on the footboards. He is genuine, manly. His bearing is splendid. He carries himself erect with shoulders well back and head high. His private life shows through the work he performs on the stage. He lives carefully. Any dissipation, any trifling with the natural laws laid down for all of us, would rob him of the secret of his fame — his rich voice.

BREATHING FOR LIFE

INTO the walls of your 700,000,000 lung cells a stream of dark, poisoned fluid is striving to enter to unload its poison. The oxygen from the air penetrates the delicate walls of those living cells, and changes that foul current of blood into a rich red tissue-building stream; but if only a small per cent. of your lung space is used, then old, dead air and poisoned blood will remain in the lungs, and the unchanged blood which does circulate will clog or otherwise debilitate the system.

What is the proper method of breathing? The little sleeping child teaches you. The whole chest and abdomen rise and fall together when it takes a long breath, and the muscles of the abdomen, including the diaphragm, have control. If you get the full value of the vital process of breathing, the walls of your abdomen must act such a prominent

part that not only will your lungs be filled with air, but *your bowels will be scientifically massaged.*

With an outward motion for each inhalation, an inward motion for each exhalation, twenty breaths to the minute, and you have 2,400 most helpful wave movements over the digestive and assimilative organs! Aside from the action of the secreted fluids, the digestive process consists in muscle motions of the digestive tract. What an aid deep breathing would be to these motions. Is it any wonder, when most of the human family sit bent down over their bowels like a wagon tire, that constipation and consumption eat out their vitals? Then brace up, and breathe. Let the upper and lower part of your lungs be filled with oxygen and your bowels massaged by the abdominal muscles, and you will be on the road to renewed strength and life.

CLIFFORD G. HOWELL.

MUSCLE AND HEALTH FOR BOYS

By *Bernarr Macfadden*

ONE of the finest and one of the most natural exercises in which a boy can indulge is wrestling. It is as natural for a young boy to wrestle as it is for him to run or walk or play. In fact, wrestling is one form of play, and unquestionably it is one of the most beneficial forms of play that can be enjoyed.

There is but little, in fact, no danger of injury if the boy is fairly strong, and even if weakly, if he wrestled with an opponent of his own strength there is no danger.

This exercise uses and develops nearly every muscle in the body, and it gives the boy a rugged vigor that no other kind of exercise can develop. Of course, it is of some value to know some wrestling tricks, but this is by no means necessary if you are desirous simply of having fun and of securing needed exercise at the same time.

Select a boy of your own weight and strength and just begin to wrestle—that's all at first.

Probably the most convenient form of wrestling is Physical Culture Style, which is illustrated in the December number of *PHYSICAL CULTURE*. In this style when either contestant is thrown off his feet a fall is declared. This makes the decision in reference to a fall very

simple, and there will be fewer disagreements as to who has won the contest.

Of course, in beginning the exercise it would be well not to struggle too vigorously for a fall. It would also be well to remember the necessity for some surface fairly soft on which to wrestle. A

green sod makes about as good a wrestling mat as one can secure. If there is none of this about a very cheap wrestling mat can be made by securing two barrels of sawdust and spreading it evenly over the floor and then tacking a thin canvas covering over the sawdust. This "mat" should be about twelve by twelve feet, or larger if desired, stretching the canvas tightly, just as you do a carpet.

In wrestling, if clothing is worn, it should be remembered that it is a foul to catch hold of the clothing. It is better usually to wrestle in trunks, such as the boys are wearing whose photographs are used in



The above exercise is fine for strengthening the back and for making the body more supple. Keep the knees as straight as you can, standing with the feet wide apart, and reach as far back as you can, as shown in illustration. Now keeping the elbows straight, swing the arms high overhead and as far back as you can. Continue the exercise until tired.

the illustrations.

If the exercise is indulged in very frequently it is sometimes not a bad plan to have a pair of tights with leather knee pads sewed on the outside. This will protect the tights and also the knees from injury when coming in contact with the floor or when being rubbed on the mat

Strong back, arms and chest are necessary to make a success at wrestling, though it is not essential that this strength be possessed in the beginning. A boy

who will wrestle frequently will find soon that his chest increases in size, and that his arms, chest and back are growing rapidly stronger.

BOYS' QUESTION DEPARTMENT

Q. I am fourteen years old, standing five feet six inches, and doctors tell me I am outgrowing my strength. Have I started physical culture, but have sore joints and feel weak. What treatment is best?

A. The soreness you mentioned is probably caused by the unaccustomed exercises. The soreness should disappear very quickly and you should gradually improve. If you take regular and vigorous exercise it is impossible for you to outgrow your strength. Don't allow any one to worry you with any such foolish theories.

Q. What weight of dumb-bells should a boy of fifteen use?

A. The weight of dumb-bells should depend upon your strength. If you are of ordinary strength for this age, the light dumb-bells that you use should weigh from two to three pounds each.

Q. What would you advise for roarings or murmurings in the bowels?

A. Rolling the closed hand back and forth over the abdomen, pressing in slightly, would be likely to remedy your trouble, though the various exercises bringing the muscles of the abdomen

vigorously into play are especially advised, particularly the exercises for building vital strength that were given in the March, 1903, issue of PHYSICAL CULTURE.



The Arm Throw.—While standing, facing your opponent, grasp his arm near the elbow, as shown in the illustration, then turn suddenly and shoulder your opponent's arm, bringing your shoulder back close to your opponent's chest, as shown above. Then give him a toss over your head. Do not throw him too hard, as there might be danger of injury.

do not overwork and thus exhaust your muscles.

Q. Have sores in the shape of large pimples on back and chest, and have very poor nerves, with weak heart action. What treatment shall I adopt? I

Q. What games would you advise an active boy of fifteen or sixteen to play?

A. No special game can be recommended, though any game that actively and vigorously uses all the muscles of the body is to be advised. Baseball, football, tennis, golf, all have their advantages, though for a growing boy, if he is fairly strong, baseball and football and similar games are perhaps the best for developing rugged health.

Q. I am growing too rapidly. Will exercise stunt the growth and prevent the arms from growing? Shoulders also narrow.

A. Exercise will not stunt your growth. It will make your body grow more shapely, provided, of course, you

drink great quantities of tea. Would this have any effect?

A. Active outdoor exercise, friction baths such as advised in this issue, and complete avoidance of tea and coffee, and the adoption of the two-meal per-day habit, with thorough mastication of all food, and free drinking of water, should in time remedy your trouble thoroughly.

Q. I am sixteen years old, and having read the letter that appeared in the Boys' Department recently, find that my case is similar. I suffer from the results of the habit you mention. Your warning is appreciated, but being too late, what can be done now?

A. Physical culture is the only means



The Hip Lock.—Place your arm around your opponent's waist while facing him, grasping his wrist with free hand. Now suddenly turn on one foot and bring your hip in, as shown in the illustration, then lift him off the floor and toss him over your hip, bringing him to the floor.

that can be used to remedy your trouble. You should not give up hope if radical improvement is not made at once. It may take several months to convince you that you are on the right road. When the body has been almost completely wrecked by perversion of this character, the building-up process is always slow. The nerves must be made more normal, and the functional system must be strengthened in every way.

Q. Will long walks and skating improve weak ankles?

A. Long walks and skating will be especially beneficial in strengthening the ankles. Skating is probably better than walking for this purpose. When you first begin to skate in the fall the muscles of the ankle are usually the first to tire, thus indicating that they are vigorously used in this exercise.

VACCINATION RESISTED IN SOUTH DAKOTA

To the Editor:

In the spring of 1902 the Health Officer and the Chief of Police came into the place where I was working, and stated that every one must be vaccinated. I did not believe in vaccination, and as I would not submit, I was taken to the common city jail and put in a cell. I said I would stay at home as long as they thought there was danger, but this would not satisfy them. It was either vaccination or jail.

The Board of Health consists of county attorneys and two doctors, but only two of these members were present when they passed the order to enforce vaccination,

and to an ordinance made in that way we are expected to submit. I, for one, will fight for my liberty.

I brought suit against the Chief of Police, and got judgment against him on all issues. In 1903 a law was passed in this State against compulsory vaccination. I think that if people would stick up for their rights all over the United States they would soon put a stop to the practice.

Yours respectfully,

ENOS E. SANDBERG.

Lead, S. D.

THE GREAT PHYSICAL CULTURE EXHIBITION

BRIEF REVIEW OF THE RESULTS AND SUCCESSES OF THE MONSTER SHOW

THE mammoth Physical Culture Exhibition, one of the most unique entertainments ever presented in New York City, can be called an undoubted success. Various contests furnished most interesting features, and there is probably not a visitor to the show who did not fully appreciate that it was the greatest exhibition of the kind ever given under one roof. There were races, wrestling matches, weight throwing, fasting competitions, strong-men contests, and almost every feature in the athletic and physical culture line that could possibly be conceived.

The great Exposition opened with the three-day fasting go-as-you-please race. About sixty-five men started in this race, though after the first day they began to drop out very rap-

idly. Nearly all the old-time six-day racers were entered. The fasting idea was new to them. They had been accustomed to stuffing themselves continually with food, and many of them were unable to stand the gnawings of hunger and

were compelled to drop out. Toward the end of the race the number of competitors had dwindled down to twelve. Several of the contestants tried to break the rules by eating; but they were in every case barred out. The fasters had two watchers both night and day, and it was almost impossible for any of them to secure the least amount of nourishment without discovery.

This race was won by Pat Dineen, of Boston, who had about 159 miles to his credit. George Cartwright came second, a mile behind.



Miss Emma Newkirk, Santa Monica, California

First Winner in the \$1,000.00 Contest to Select the Most Perfectly Developed Woman in the World

It must be of interest to all Physical Culturists and Vegetarians to know that these two men are total abstainers from meat in their meals. Mr. Dineen, when interviewed, stated that he dropped meat from his diet about a year ago, finding that he could race a great deal better without it. His meals are taken twice a day and consist principally of fruit, eggs and grains. Cartwright, who has been a runner for twenty-five years, has abandoned meat eating since two years ago. He was injured to the three-day test of endurance by his practice of taking short fasts whenever ill-disposed. All who dropped out in the early part of the race were meat eaters in a more or less degree.

Probably about the most interesting contest of the Exhibition was the contest to decide who were the most perfectly developed man and the most beautifully developed woman in the world. Contestants from all parts of the world were entered in this unique competition. Photographs of the winners from the various sections appear in this article, and show very accurately the beautifully formed women and magnificently developed men who were among the competitors. It should be remembered that these photographs represent only the winners from various sections. They were selected from hundreds of entries, and show the best

physical representatives from the different parts of the world.

The method originally intended for deciding this contest was abandoned toward the end of the week. It was found that the friends of the various contestants were using influence, and that if the popular voting method was adopted, the deserving winner might not secure the prize. A board composed of

prominent sculptors, physicians and physical culturists was then appointed, and the winners were named in order as follows:

WOMEN.

First, Miss Emma Newkirk, Santa Monica, California.

Second, Miss Jeannette Baier, Minneapolis, Minn.

Third, Miss Beatrice Marshall, New York City.

Fourth, Miss Annie Oxley, Sheffield, England.

MEN.

First, Albert Treloar, New York City.

Second, Carl Victor, St. Louis, Mo.

Third, Harry Brickman, New York City.

Fourth, W. E. Clements, Leicester, England.

Each of the \$1,000.00 prizes, instead of going to one contestant, as originally intended, was divided, at the suggestion of the contestants, into four prizes, as follows: First, \$500.00; second, \$250.00; third, \$150.00; fourth, \$100.00.

It would be impossible in a short article to make special mention of all the



Miss Jeannette Baier, Minneapolis, Minn.

Winner of the Second Prize in \$1,000.00 Contest to Select the Most Perfectly Developed Woman in the World.

the 220-yard run in 27½ seconds, and the mile run in 6 minutes 14½ seconds.

This contest proved very accurately that the man who carries a small amount of flesh loses very little, if any, strength during a seven-day fast.

Mr. James Mitchell, who holds the championship for hurling the 56-lb. weight, stated that he never saw better work with a 56-lb. weight among athletes. Gilman Low, who won second prize, claimed that his strength had not deteriorated a particle, and proved it by performing additional feats of strength after the various contests.

Following the three-day fasting race, a two-day go-as-you-please race was started, contestants to use physical culture food only. This proved an interesting feature, and resulted in exciting contests between the various competitors. The race was started the day after the completion of the three-day fasting race. This two-day race on physical culture food was won by Davis, a half-breed Indian, of Hamilton, Canada, with 86 miles and 7 laps to his credit. It is worthy of note that Davis had won third place by a fairly close margin in the three-day fasting race before he entered the race with physical culture food. Whether the three-day race without food improved the physical condition of the Indian and made him better able to win this second race is, of course, an open question, but in a statement made at the end of the races he claimed he never felt better after a race than after the two he went through and they were the severest test of endurance he had ever undergone. The physical culture food he received, which consisted of rich dark grape-juice, cider, raw egg and milk for drinks, and whole wheat bread, nuts, raisins, figs, prunes and fruits as solid food, undoubtedly added much to make him feel so strong after the severe test of human endurance. Peter Hegelman came in second about a mile behind. Both these endurance racers are total abstainers from liquor or tobacco in any form.

The world's contests for women

brought forth many surprises. The record for fifty yards for women was broken by a sixteen-year-old girl, Kathryn Ryan, New York City, who ran the distance in 6½ seconds. This same young lady also holds the world's record for women for high jumping. She goes over the bar easily and gracefully, and her jumping was so much superior to that of the others who entered this competition, that comparisons were grotesque. A photograph of this young lady appears in this article, though it does not show the beautiful contour of her figure nor indicate the lithesome, graceful movements she is capable of making.

Probably one of the most interesting events among the championships for women was the mile run. Many athletes who have attempted to run a mile were inclined to ridicule the idea of women attempting a feat of this character. There were about eight starters in this race, and they all got along fairly well in the first half, but in the second half the race dwindled down between two contestants, Miss Emma Newkirk, of California, and Miss Rose Wentland, of Pittsburg. Miss Wentland set a very fast pace for the first three-quarters; but Miss Newkirk apparently had more experience, and she kept up a steady pace at almost the same speed from the beginning to the end of the race. During the last two laps she passed Miss Wentland and won the race in 6 minutes 14½ seconds. It is interesting to note that Miss Newkirk is the same young woman who was declared by the judges to be the most perfectly formed among the various contestants. She is an all-round athlete of considerable ability.

The attendance during the Exhibition was perhaps all that could have been expected for a first attempt. The great majority of the New York public were unfamiliar with the character of the Exhibition. Next year's Exposition will undoubtedly prove more of a success, even from this standpoint, as every visitor this year will undoubtedly make nothing but laudatory comments on the show.

Send three two-cent stamps, and a large 64-page Souvenir Program of the great Exhibition will be mailed to you. It contains portraits of many of the contestants, detailed daily program, a sketch of career of Bernarr Macfadden, and much other matter of great interest to all physical culturists. The pages of the program are the same size as those of this magazine.

AFTER THE SHOW

SOME "SMALL TALK" BY AN INTERESTED VISITOR

NEVER, since the day when Solon is said to have stood with Anacharsis at the door of the gymnasium, pointing out to his Scythian guest the beauties and advantages of the Grecian physical culture, have the doctrines advocated by this magazine received so fitting an exemplification as at the great Madison Square Garden Physical Culture Exhibition. And never, in the history of education, has the cause of bodily development aroused an interest as widespread and intense as was revealed in the enthusiasm expressed at the show throughout the week.

The outlay of many thousands of dollars in behalf of this enterprise had been undertaken with no little anxiety. There was some misgiving as to whether, indeed, the time was yet ripe for so great an event. As nothing succeeds like success, so nothing is ever a more successful failure than a fizzle; and a failure here would not only have entailed a very heavy financial loss, but would have been a moral calamity. Yet there were no modern precedents on which to ground a cal-

culatation of chances. A sheer risk had to be run. In the interest of the cause, the venture was made; and with something like a sigh of relief, therefore, the management looked upon the first of the immense assemblies of friends of physical culture who for six days and nights continued to fill the vast amphitheater.

The effect of this spontaneous outburst of popular approval is beyond all computation. Those who had looked upon athletic publicity as but a variety of the sporting life will now take a more serious view of physical training as a branch of education, and of these exhibitions as a legitimate show of worthy result. Muscular development, and manliness of form and carriage, will more unreservedly command the respect of thoughtful men and women; and intellect will not be supposed to imply the humped back of an *Æsop* or the dyspeptic gloom of a *Carlyle*. Woman, as representing the beautiful, the true and



Albert Treloar, New York City

First Winner in the \$1,000.00 Prize Contest to Select the Most Perfectly Developed Man in the World

the good, will take courage to lay aside the unwholesome paraphernalia of prudery and fashion, and will seek more diligently

the attainment of her ideal in a course of wise, healthful living. And the time, let us hope, is not far distant when these exhibits, having passed the experimental stage, and having assumed a distinctive character and aspect of their own, will become, in every large city of the world, an annual index of the health and happiness of the people.

The visitor, looking from any one of the thousands of seats toward the arena, was struck with the unceasing round of the three-day and two-day racers. One of the former, known as "the Indian," having raced three days without food, actually entered the two-day race with fresh men and won the first prize. In a furnished booth lounged the seven-day fasters, who, on the last night of the Exhibition, ran three phenomenal races. They were the subject of much scientific interest; and on Friday night one of these athletes, a New York artist, in a special test at the request of the reporters, lifted five hundred pounds twenty times in fifteen seconds, and nine hundred pounds twice in twenty seconds.

Strength and endurance were tested in almost every conceivable way; and in many cases much artistic skill was required in order to make the tests available. For example, in the long slide of the woman hanging by the hair of her head, it is vitally necessary that the hair be so evenly tied to the carrier on the wire as to pull with absolute uniformity upon all parts of the scalp. One cham-

ion wrestler would force another to the ground by sheer muscular force; and again, one of them would be so skillfully surprised into a fall as to set both of them to laughing with the spectators.

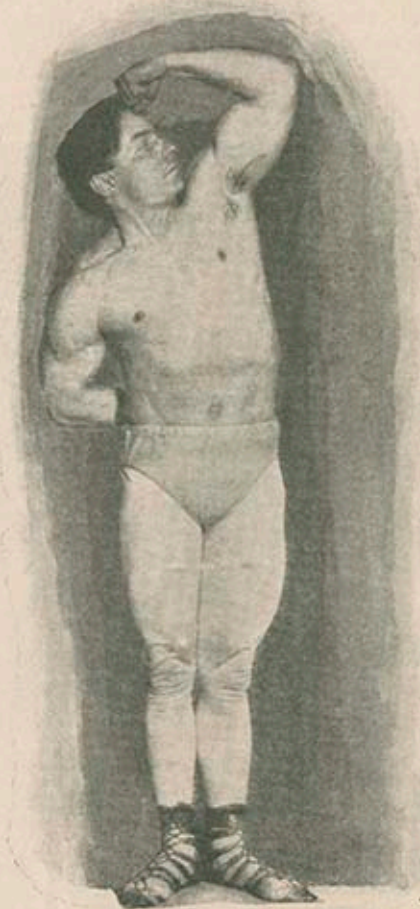
Toughness of tendon was tested by two strong horses pulling in opposite directions upon a man's arms hooked at the elbows into their harness. In throw-

ing the heavy weight for height, one of the seven-day fasters, instead of hitting the bottom of the hanging tub, sent the weight up and over and into the tub, bringing down all the apparatus with a bang. The exercises upon the parallel bars and many of the pyramid and other athletic feats of the turners, were marvelous displays of muscular development. The turners, it may be said, as a rule, avoided the picturesque, and were modestly solicitous to show how the body can be brought to perfection as an agent in all human activities. And in this connection it should be remarked that the women and girls who entered the contests were from all the honorable walks of life; some were rich, and some were poor; but all, without exception, looked the picture of healthy womanhood.

When not engaged in

the different events, they were sensibly and plainly dressed and were beautiful specimens of the corsetless Physical Culture woman.

Several world's records were broken; including the record for endurance, broken by the Indian. Perhaps the most interesting of the new records was that



Carl Victor, St. Louis, Mo.

Winner of Second Prize in the \$1,000.00 Contest to Select the Most Perfectly Developed Man in the World

made by a sweet, unassuming schoolgirl of New York City, who ran fifty yards in six and two-fifths seconds, thus not only breaking the world's record for women, but coming dangerously close to that of the men. The same girl, in the running jump events, cleared the rope at four feet six inches. One of the most exciting runs was in the one-mile race for women; in which an Eastern and a Western woman, outstripping all others, held their own together amid thunders of applause until near the finish, when the "West," by one supreme effort, spurted to the goal barely ahead of the "East."

muscular movement. In the second class was the noisy partisan, yelling for his candidate, combined with the yell of hundreds of others. No sooner was the black curtain drawn aside than an indescribable roar rent the air, in which "England," "California," "Boston," "Pittsburg," "New York," "Minneapolis," "Canada," "St. Louis," "France," "Philadelphia," "Chicago," were mingled wildly. The third class, upon which it was early evident that the final reliance must be placed for decision, was composed of chosen artists, physicians and other men of established professional



Miss Maitland

Miss Kathryn Ryan

Miss M. Hammond

Three Prize Winners of the Girls' Races at the Physical Culture Show

Miss Kathryn Ryan, who is a High School girl of New York City, has broken the world's record for women, completing the fifty yard dash in 6.25 seconds time. Miss Ryan also holds the world's record for women in the high jump, having cleared the bar at the height of 4 ft. 8 in.

Of the most perfectly developed men and the best formed women representing the different parts of the world, there were three classes of judges; all of whom were agreed in declaring that they had never seen anything approaching so beautiful and superb a company of manly men and womanly women. In the first class was the quiet spectator, who beheld, in the peculiarly brilliant lights and deep shadows of the modern electric light, a picturesque assemblage of women clad in marble white, and of men whose unclad limbs and upper bodies reflected a marvelous variety of muscle and

reputation, whose official word, in a matter of so great artistic and scientific importance, might be looked upon as final. These gentlemen, who together formed as competent a board of judges as could be desired, after carefully considering every suggested question of anatomy, physiology, hygiene and æsthetics, and weighing the candidates together with reference to their various points of individual superiority, have rendered decisions as nearly perfect as could be hoped, and which will be subject only to the usual challenge of coming forward at the next Exhibition for a new championship.

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FEMININE UGLINESS UNVEILED

A REMARKABLE ARTICLE BY A YOUNG WOMAN WITH MANY YEARS' EXPERIENCE IN A TURKISH BATH ESTABLISHMENT

By Mildred Goune

OPERATING MANAGER OF THE — TURKISH BATHS



NO one knows more of the woeful, disgusting condition of the bodies of the present-day fashionable and unfashionable women than does the managing operator or the assistant of a Turkish Bath Establishment for Women. The appearance of the hundred and one different women, who come under my jurisdiction for treatment, is simply revolting to any normal, healthy person of the same sex, and, if any one in all this world needs exercise, it is these once-upon-a-time normal women, who are daily steaming their strength away with Turkish baths.

In my vocation, I have tried time and time again to induce these women to include exercise with the baths, but the overstout woman is absolutely too lazy, and the lean woman hasn't the time, even to take her bath properly when she comes. It is a shame that so many women neglect themselves in regard to exercise—a thing so very essential, if she would promote and prolong health. As a woman, I blush at this staring degeneracy of my sex. The women who make a practice of patronizing Turkish baths have a tendency to do mostly as they please, and some will not consent even to talk with you on the subject of exercise. I do not find one whit of fault with the present crowded divorce courts, for if I was a man, and was so deceived by the para-

phernalia of fine feathers, pads and skirts, and found only such a specimen of womankind as is shown in the carefully executed drawings herewith, I would run, aye fly, from the sight and into the nearest divorce court I could find.

Take the hideous accumulated mass of what John Alex. Dowie would call a "flesh-pot" in the first illustration.

This woman told me one day, with a tired stretch of her arms, that she "wouldn't give a stuaw for that absolutely wediculous fad, Physical Cultuwa, which is nothing but a senseless, perspwing effart." How I pity a woman of this stamp! She is so lazy her brain cannot work actively, hence her easy-going, careless, aimless existence. Now, this woman is not at all badly proportioned as to frame. The lengths of her arms and legs are about

right, and her length by heads also approaches closely to the standard. But the woman is absolutely lazy and will not take to physical exertion in any form. I certainly pity a woman of this stamp. Why, she is so lazy even her brain goes to sleep when it should be actively engaged. She has stated that she will not walk when there is the faintest chance to ride, and she has had a maid to dress her for the past ten years. With some such statement, she will step into the



Normal Fully Matured Female Figure. A symmetry and beauty of form at least equal to this should be possessed by all women. If not, the corset, or else ignorance or laziness, is to blame.



No. 1. This represents a woman who is lazy; many pounds overweight; with proper exercise and diet could be moulded into a very presentable figure.

The sadly developed figure in the second illustration is a decided contrast to No. 1. This specimen of "the woman form divine" has never been fed properly, or else the body has never had sufficient exercise to assimilate the food eaten. Direct blame cannot be laid entirely to the constricting corset, since her whole body has that thin, undeveloped appearance. Her face is full enough, but for the long time in which I have seen her at the baths, it never had that rich, fresh bloom which always denotes a healthy body. The legs, as can be seen, are in even worse condition than the body, and show a dire need of exercise applied directly to them. All the exercises suitable for leg work should be freely indulged in. Walking, although very beneficial in a case of this kind, would alone not be sufficient. The arms are not so badly developed; her piano practice accounts for that. Even her chest and neck are more or less in keeping with her well-developed arms. If this woman would stand herself before a mirror at home, entirely disrobed, and I advise every woman to do the same, she would stand in horror at the defects of her own form, and perhaps set to work to remedy them with careful exercise.

Illustration No. 3 shows a too prominent abdomen when the development of

comfortable tank, and begin to enjoy the lazy effort of floating.

This fat, vulgar-formed woman, a shame to her sex, a shame to her husband, a shame to the human race, will float through life to the grave in the same lazy manner. The only disturbance that may ruffle her body may be the trouble of getting her through the door.

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woman form divine" has never been fed properly, or else the body has never had sufficient exercise to assimilate the food eaten. Direct blame cannot be laid entirely to the constricting corset, since her whole body has that thin, undeveloped appearance. Her face is full enough, but for the long time in which I have seen her at the baths, it never had that rich, fresh bloom which always denotes a healthy body. The legs, as can be seen, are in even worse condition than the body, and show a dire need of exercise applied directly to them. All the exercises suitable for leg work should be freely indulged in. Walking, although very beneficial in a case of this kind, would alone not be sufficient. The arms are not so badly developed; her piano practice accounts for that. Even her chest and neck are more or less in keeping with her well-developed arms. If this woman would stand herself before a mirror at home, entirely disrobed, and I advise every woman to do the same, she would stand in horror at the defects of her own form, and perhaps set to work to remedy them with careful exercise.

Illustration No. 3 shows a too prominent abdomen when the development of



No. 2. Very poor development in body, especially below the waist.

the other parts of the figure are taken into consideration. In length, however, she is fairly well-proportioned. The abnormal part shows effectively the mass of precious vital organs, which have been pressed out of place and forced down by the instrument which is a curse to our sex, the corset. Thousands of corseted young women throughout the country find themselves in the same situation, and then adopt another corset or invent some way to press the vital organs in a different fashion. This woman, illustrated here, is a mockery to motherhood; and the man who will seek her for his wife must either be blind or slightly demented.

The fourth illustration shows a disgustingly weak condition of the breasts, due to the corset habit also. The constitution of this woman is yet at such a weak stage that she cannot swim to the other end of the swimming tank, a distance of sixty feet. She has often held forth to me the great fascination of the after-theater suppers. I believe her weak, nervous condition is also the effect of imbibing much too freely of wines, for when I was in charge of the night force of operators she would come to the baths direct from one of those suppers, and it was no pleasure for the operator, I assure you, who had the honor of "fixing her up."

The emaciated, ungainly-shaped figure in the fifth illustration is a demonstrable human victim of the tight lacing habit in another form. I feel keenly for these human frailties of what should be splendid specimens of womanhood, and I often wish I could convince them of the absolute necessity for the freedom of heart, lungs and blood in cultivating a shield of muscles and strong bones instead of a weakening shield of steel. Fashion ruins



No. 3. Fairly good, with the exception of the abdomen; it is much too large for the other proportions of the woman.



No. 4. Very stiff figure; shamefully prolapsed breasts, due to corsets.



No. 5. A very thin, emaciated figure; also a pinched, corseted waist. Poor, stagnated circulation.

health in many cases just as sure as night follows the day.

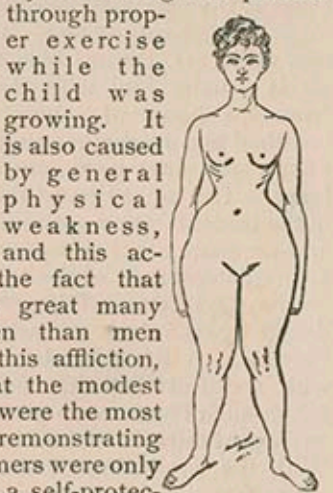
In the sixth illustration, the figure shows a deplorable condition of development, especially below the waist line. The abnormal hips and the small, pinched waist form a disagreeable contrast. The knock-knees might have been remedied by intelligent parents through proper exercise while the child was growing. It is also caused by general physical weakness, and this accounts for the fact that there are a great many more women than men who have this affliction, and also that the modest women who were the most persistent in remonstrating against bloomers were only fighting it as a self-protection. Another reason for this weak condition in the legs of women lies in the fact that women do not walk enough; and most of the knock-knees among them are due to this fact alone. Weak knees, if not guarded against, will in most cases produce the knock-knee condition.

The seventh illustration shows square, ugly shoulders and a sloping hip, whereas in the sixth illustration the contrast is directly the reverse, sloping shoulders and square, protruding hips. This poor, bow-legged creature has also large feet and undeveloped womanly busts.

The pitiable hanging fixture shown in the eighth and last illustration is the picture of a young woman! It shows an utter lack of exercise. The body is too weak to sustain itself without the accustomed instrument. The breast is overdeveloped and is not firm. The arms are much too long. The thigh and

health in many cases just as sure as night follows the day.

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No. 6. Very ugly figure, because of extreme smallness above waist and excessively massive legs below waist. Hips and legs much too large. Knock-knees.

knees are both too large compared with the calf, which is very much undersized and undeveloped; the stomach is high and the posterior is also too protruding.

All these illustrations are accurate and not in the least overdrawn; true to life as I witness them each day in my work. The majority of women of all classes are far from the standard of perfection, and I only take these drawings as a criterion as to the appearance of almost every woman, if subjected to the same observation and test.

The crime of it all lies at the door, foremost, of fashion! Another great part of it must be attributed to the inherited weaknesses and sins of our parents. Some part to the cast-iron educational system of prudes who blind a young girl to the condition in which she is growing to womanhood. But the greatest cause of this "mother suicide," this glaring inefficiency of my sex, is the fact that they are *lazy*—shamefully so!



No. 7. Square, ugly shoulders; breasts small and undeveloped. Bow legs and large feet.

They continue to *exist*, but do not *live*! They are "half alive," "half presentable." If the lesson conveyed by this article is of any avail to the men who have yet the choosing of mothers for their children, I am satisfied. In the name of the generations to be, in the name of all that is good and lasting in a race, I appeal to the present-day woman to arouse herself from her lethargy, to cultivate and strengthen her body that it may be worthy of the sacred duties imposed upon it.

With a little exertion, a little effort of will, to exercise the body daily, *Womanhood* will enter into its own with a prouder grace, a finer beauty than outward adornment can give, unfolding further, like some rich rose, into beautiful, perfect *Motherhood*.



No. 8. Neck too long. Stooping figure and generally out of proportion. Arms too long.

THE SYMPTOMS, CAUSES AND CURE OF CONSUMPTION

By Bernarr Macfadden

THIS disease has proved to be one of the most fatal against which civilized human beings contend. Nearly one-fourth of the deaths are caused directly by it. Medical science has struggled in a vain endeavor to find some remedy that will be productive of benefit.

Alcohol and all sorts of poisons and stimulants have been used in their vain efforts to combat the disease, but even medical men are now beginning to realize that no medicine can cure it. The New York Medical Society issued recently a circular wherein it was stated that no drugs of any kind would be of benefit in treating consumption. They maintain that fresh air, exercise, proper food and other hygienic precautions are the only remedies that could be applied to the cure of the disease. This is a step in advance for which medical men are to be commended. They have learned the truth as to consumption, and the day is not far distant when they will be compelled to make similar acknowledgments in reference to all the other diseases that afflict mankind.

GENERAL SYMPTOMS.

General debility is frequently one of the first serious signs of the disease. Emaciation, very heavy breathing upon the slightest exercise, loss of appetite or an abnormal appetite, pain in the chest, hoarseness, the expectoration of frothy mucus, rusty sputum or mucus streaked with yellow, chills or chilliness in the morning or forenoon, and night sweats. All or a part of these symptoms are present usually at some stage of the disease.

GENERAL CAUSES.

Consumption begins usually with a slight cold; in fact, it is the tendency to catch cold on the slightest provocation that opens the way usually for the more severe form of the disease. Each cold contracted seems to hang on a little more

persistently than the preceding one, until the condition becomes chronic.

The causes that really lead up to and make the disease possible can be anything that will be inclined to lower the general health. Probably the most prevalent cause is the breathing of impure, confined air. In the living rooms, churches, theaters and cars, during cold weather, the air is usually foul with the emanations from the lungs of others, and this is breathed and rebreathed until it seriously affects the functional processes of the lungs. The inhalation of dust, especially in the trades of stone cutting, file grinding and occupations of this character, is also a prominent cause of the trouble.

The next cause of importance is undoubtedly the lack of active muscular exercise. A life of indolence and ease, with the full diet that usually accompanies such habits, soon gives this disease an opportunity to secure a firm hold. With the weakening of the muscles the entire functional and nervous system declines to a similar degree. The arms and every part of the body become flabby, soft and flaccid, and the muscular tone of every internal function lessens to a similar degree.

The next important cause is dietetic errors. Improper foods of all kinds, such as are consumed by the average civilized human being, very greatly aggravate this disease, and make its inroads far more serious in nature.

Tea and coffee, and other stimulants, alcoholic and otherwise, and so-called foods of this nature, have much to answer for in being the cause of consumption. Very heavy feeding, eating beyond the digestive capacity, the use of foods that are deficient in nourishing qualities, are prevailing errors.

A too meager diet is also sometimes a cause, especially when foods deficient in nourishment are used. The neglect to recognize the necessity for thorough mastication, and the use at one meal of a very

large variety of foods which make combinations difficult of digestion, are also contributing causes.

Though medical men as a rule look upon contagion as one of the principal causes, the fact that it is impossible to inoculate healthy lungs with the disease very accurately proves the falsity of this theory.

Sexual excesses can also be blamed with causing the disease in a great many instances. Indulgences of this character weaken and debilitate the entire functional and nervous system, and the disease is able thus to secure a firm hold. In fact, it might be stated and proven with a fair degree of accuracy that this excess, either in self-abuse or in a natural manner, is the indirect cause of the majority of cases of consumption, and in many instances is the main cause that prevents recovery.

The use of alcoholic liquors and dissipation of all kinds, together with the use of tobacco, are causes that deserve consideration, and these things should be avoided absolutely in striving for recovery.

Many claim that consumption is inherited. This theory has been admitted to be untrue by some of the most renowned medical authorities. One can inherit a tendency to the disease, but even the weakness that makes the body an easy victim to the disease can be entirely remedied.

Grief or disappointment that is allowed to influence the mind for a prolonged period are other causes well worth considering.

Many consider climate to be a cause of importance, and though it must be admitted that some climates would be better than others, yet by following proper habits of life one can keep free from or cure the disease in almost any reasonably healthful climate.

PHYSICAL CULTURE TREATMENT.

In the treatment of this disease it is first of all necessary to insure a free supply of pure air at all times. If it is possible, the patient should sleep out-of-doors, or where the air blows directly upon him.

He should spend much of his time in the open air in active exercise, and deep breathing exercises should be used freely. The lungs must be given every opportunity to build up and to maintain the highest degree of strength, and this can be secured only by giving the most careful attention to the deep breathing exercise required in thoroughly carrying on the purifying processes of the lungs.

Regardless of the stage of the disease at which the treatment may be begun, it must first be fully understood that the mucous discharge from the lungs, always present in serious cases of consumption, accurately indicates defective digestion and inactivity of the depurating organs of the body. The lungs are being used practically to carry off these foul impurities with which the blood has been loaded. Therefore, one of the first requirements in treating this disease is to adopt a diet in quantity and quality that will insure thorough digestion and absolute regularity of the bowels.

The next in importance after fresh air and diet is undoubtedly exercise. Though almost any system of exercise that thoroughly uses all the muscles can be recommended, active exercise out-of-doors, such as walking, running and any active work or play that does not strain or exhaust, must be insisted upon. If the patient has gotten beyond the point where exercise can be taken, or where there appears to be no possibility of building up sufficient strength to take exercise, but little hope can be extended.

The necessity for keeping the depurating organs of the body in a thoroughly active condition cannot be too strongly emphasized. The bowels, the kidneys, lungs and skin will all be active aids in the process of recovery if they are given satisfactory attention. A constant supply of pure air and deep breathing exercises for the lungs, proper food to insure regular evacuation of the bowels, and the free use of the purest water for the kidneys, will accomplish, usually, this result for these organs. But the skin, in order to perform its office effectively, must be given special attention. Daily a dry friction bath, such as illustrated in this number, should be taken. From five to fifteen minutes should be spent in taking this bath.

Two soft bristle brushes can be used, although a fairly rough towel, used in the manner described in this issue, would be effective.

It would be well to precede this friction bath by some exercise bringing into play all the muscles of the body and thoroughly arousing the respiration, making it necessary for you to inhale deep, full breaths.

In the treatment of consumption this friction bath should be followed by a cold sitz bath, remaining in the water as long as you conveniently can, and still be able to recuperate with a feeling of warmth. If it is difficult to recuperate in this manner, before immersing the body in the water stand in a pan of warm water and also immerse the hands in warm water. Following this cold sitz bath the body should be wet all over and then quickly dried. It would be well to note, however, that in case you are absolutely sure of recuperating with a feeling of warmth, you might allow the skin to remain wet and put the underclothing on over the wet skin, in which case the activity of the pores will be increased still more, and recovery from the disease will be hastened.

In order to realize thoroughly the value of the friction bath in the treatment of consumption, the attention of the reader is called to the story of such a cure that was made by this one aid alone, as mentioned in the article describing the dry friction bath, given in this number.

Of course, as stated before, diet is of considerable importance in treating this disease, although individual peculiarities must be considered when selecting a diet. The main object is perfect digestion. Simple foods in their natural state are always far better than those that have been put

through complicated preparation. If the appetite is poor, a fast of from one to five days is advised. Milk, cream and butter, unless perfectly digested, should be used very sparingly, or avoided entirely, although milk can be used freely with an exclusive diet of fruits and nuts, if one is desirous of following this strict régime. A vegetarian diet will assure recovery far quicker than a meat diet, although if the vegetarian diet is followed, some kind of beans or peas in their dried state must be served in some palatable form with every meal.

Never eat more than two or three kinds of food at any meal. If the meal is confined to one kind of food which fully nourishes the body, it would be far better. Fully matured dried beans, or peas, simmered, never boiled, from three to six hours, or until a proper degree of softness has been attained, and then mixed with tomatoes and sliced onions, for flavoring, would make a very palatable dish, and would furnish nourishment easily for the heartiest kind of a meal. Buttermilk and acid fruits can be recommended, especially whenever a desire for this kind of food is present. Do not under any circumstances eat food that is not palatable. If you have no appetite, fast until you can enjoy your food.

In closing, I would call attention especially to the importance of mental influence. Be cheerful and happy, and determine that you will recover.

A close adherence to the régime herein described will enable almost anyone to recover from this complaint, if the disease has not advanced too far, though each individual must adapt the treatment outlined to his own particular needs.

A SIX-YEAR-OLD CHILD SACRIFICED TO THE CRAZY CUTTING HOBBY IN APPENDICITIS

To the Editor:

I wish to tell you about my niece, little Marian Arnold, six years old. She went to school for the first time on Monday, September 14, very proud indeed. Not feeling well, she came home the same day. The doctor called on Tuesday (with usual result, as her father had money). He pronounced the case appendicitis; performed an operation on Thursday, and she was dead on Monday, just one week from the day she started for school. Her grave was covered with flowers; but that

does not comfort our bereaved hearts.

Could you not sound a note of warning against such awful tragedies? It seems so sad that people will allow doctors to do such things. And then, when death comes, as it so often does, does it comfort you to say she could not have lived anyway and that the operation prolonged her life? Again, in the name of humanity, I ask, please sound a word of warning against these so-called operations. I am, yours truly,

J. E. Hoy.

MORMONISM—A MONOGAMIST'S REPLY

THE ARTICLE, "THE CHILDREN OF MORMON FAMILIES," HAS BROUGHT A VIGOROUS DENUNCIATION OF THE MORMON DOCTRINES

By *H. Irving Hancock*

CAN anyone read, without intense repugnance, the article contributed to the last issue of *PHYSICAL CULTURE*, by Larin Farr, on the desirability of polygamy? The editor has invited me to give my views on the subject, and I do so with the utmost pleasure, and with a sense of utmost zeal for the subject.

In the first place, the very idea of polygamy is revolting to the monogamist. Polygamy carries with it the assertion of the inferiority of woman. A half-dozen or a dozen women—perhaps a thousand—are needed to make one man happy. According to our polygamist author, while the woman must be faithful, the man is at liberty to roam the world unashamed in search of concubines. Why?

He avers that after woman has started in with conception it is necessary for her health and that of the coming child that all marital relations cease. If this is so, why is it not well that the father also should cease relations? There is a homely proverb, not yet obsolete, that "what is sauce for the goose is sauce for the gander."

The whole aim of polygamy is to foster lust in the man. No woman can be made happier through polygamy. When a woman selects a man as the one whom she loves most in all the world how can she be happy if she knows that he is spending much of his time in the company of other women, for whom, presumably, he cares as much as he does for her? And, when she finds herself about to become a mother, how can she endure the thought that he may pass from her chamber of agony to the room of another woman?

The Mormon contention is that it is against the laws of health for the prospective father to entertain relations with the prospective mother. But the man must be permitted—no, encouraged—to keep up the relations with other women

that are denied between him and the mother of his coming child. Is, or is not, this doctrine monstrous?

Your Mormon elder preaches the morality of plural marriage; that is, one husband and many wives. How would he feel if a woman prophet were to come into the church and proclaim that a man was to have but one wife, but that she might have as many husbands as she chose?

The whole tendency of the polygamist doctrine is to reduce *love*—that greatest force in life—to the debased level of *lust*. It is difficult, sometimes, to draw the dividing line between love and lust. Probably there must be *some* lust between husband and wife in order that the most perfect sympathy may exist, in order that nature's demands for the rearing of children may be met. But lust for more than one woman becomes unclean, impure, unholy. Its existence denies the equality of woman with man. It does more; it proclaims the inferiority of man. It makes him stand forth as a being incapable of keeping an equal contract. Poor, puling fool! It is not well for the child that he entertain relations with the prospective mother, but he is such a beast that he cannot curb the passions that he expects to remain dormant in her, and so he must have other wives. When such a doctrine as this comes to be accepted, to what a bestial state has man—poor, masculine man—fallen!

It is claimed that Mormon children are more healthy than are the children of monogamists. This statement is open to more than serious challenge. Where are the Mormon athletes? Let them come forward out of obscurity. If it be claimed that the Mormons display greater endurance and virility than do the Gentiles, I can state, from my own observation as a war correspondent in the Philippines, that the Utah troops, splendid soldiers though they were, did not show a whit

more lasting capacity than did the troops from the monogamist states of Kansas, Montana, Tennessee or Minnesota. It is claimed that Mormon families are more prolific—and why should they not be, under conditions where the women are sternly and effectively forbidden to prevent conception? Any man who has a dozen wives may rear a hundred children, and be "blessed" with hundreds of grandchildren. But what does this all prove? Any one who has traveled in Utah knows what the grandchildren of a Mormon polygamist are like mentally.

Let us stop to think of the countries wherein polygamy has been practiced for centuries. Persia is a shining example. What rank does she hold among the nations? Turkey is richer and more powerful, but the most virile blood in the nation comes from among the classes where the men are too poor to be able to afford polygamy. In China the richer men go in for plural marriage, and they have done so from times that antedate the reliable history of the country. Yet, in 1900, we had the spectacle of some twenty thousand troops belonging to the allied armies marching more than a hundred miles through the most populous part of a weakling empire and capturing Peking. Is Persia prosperous or healthy? Turkey? China? For our other polygamists let us turn to Africa—and what do we find? Your true stalwart North American Indian abhors adultery to such an extent that at one time offenders were torn apart by wild horses driven in opposite directions. Some of the tribes that have come in contact with the Mormons have become polygamous, and consequently *degenerates*, for they are to-day the least prosperous and the least honest of all the tribes.

The whole principle of the Mormon contention is that when a woman finds abstinence necessary, the man should be privileged to seek gratification elsewhere. It is the old, cowardly, curish proposition that came direct from Adam. Because we are men we are privileged to hide behind a woman's skirts. Adam did, so we do it. Is it not enough when, once in a while, we become thoughtful, to make us feel a bit ashamed? The man may sin, but the woman *must* not. It is the Mormon's admittance to woman that he

is so lacking in will power that he cannot avoid the filthy sinning.

It is an insult to every clean, intelligent Mormon woman that she is not permitted to demand that the father of her children must be as clean in his moral and physical life as he has always demanded that she be.

Years ago the writer attended a ladies' dinner at one of the New York clubs. George Francis Train was one of the speakers. He told forcefully the story of how Eve tasted the apple and then persuaded Adam to try a bite before she reached the core. Next the speaker described the thundering of the Lord's voice, and how Adam hid behind a tree, squeaking:

"Lord, I ate the apple, *but the woman tempted me.*"

Mr. Train's sparse hair bristled, his face became apoplectic as he raised one clenched fist aloft and shouted:

"Now, if Adam had been a *man* he would have answered back:

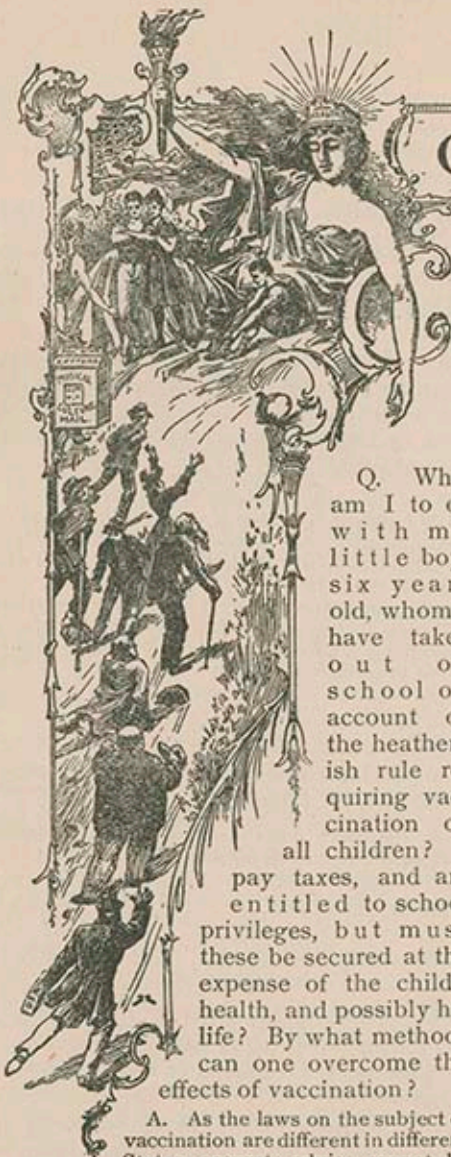
"'Lord, I ate that apple.'"

The splendid chivalry of the sentiment broke upon the guests, and there was a thunder of applause.

It is time for us to develop this same sentiment. Men should not confess themselves as being so cowardly weak that they cannot live up to the same standards that they require of women.

Is it possible for any high-minded American woman to love one man while he loves, or rather sensually glowers over, a dozen women? Can she center her thoughts on him, idealize him as her own, and strive for and with him toward one common purpose? Can he work for her where his "love" (?) is divided? In other words, is woman an utterly inferior animal—the mere chattel of another animal who calls himself "a man?"

Let the American man, who is the kindest and most generous to his womankind, who would see her happy and contented above himself, who idealizes her as the most free-born woman of the world—let *him* answer. Let the one woman reign supreme at home, in love and in her husband's every thought. Thus only will *manhood* be fostered, the purity and sanctity of the home preserved, and children born not of lust and excesses, but of *love*.



Question Department

By *Bernarr Macfadden*

It is impossible for me to give individual advice outside of the columns of the magazine. All those desiring advice for their individual needs are requested to consult some good Physical Culture teacher or natural cure physician.

Q. What am I to do with my little boy, six years old, whom I have taken out of school on account of the heathenish rule requiring vaccination of all children? I pay taxes, and am entitled to school privileges, but must these be secured at the expense of the child's health, and possibly his life? By what methods can one overcome the effects of vaccination?

A. As the laws on the subject of vaccination are different in different States, accurate advice cannot be given. One method is to refuse to be vaccinated and fight for your rights in court; but about the easiest method, and one which is very frequently adopted at present, is to call on some homeopathic or other *intelligent* physician and induce him to vaccinate your child without introducing the poisonous pus into his blood. Of course, I am aware that this will simply extend the reign of this evil, but in some cases no other policy can be adopted.

Q. Kindly publish treatment for rattlesnake bite.

A. The natural cure treatment for rattlesnake bite would be about as follows: Immediately after the bite, suck the blood from the affected part. Then apply very hot (wet?) cloths to it, and begin immediately to drink all the

water you possibly can. The more you drink, the better. Resort to the colon flushing treatment at once, filling the bowels as full as you possibly can and thoroughly washing out the lower bowels. Hot bathing and rubbing are also advised; in fact, every means that will accelerate the action of the pores of the skin and the other depurating organs of the body in throwing off the impurities of the body and the poison, should be adopted. Some advise very vigorous exercise also.

Q. Is the practice of drinking hot water in the morning a good one?

A. In some cases of stomach trouble, the drinking of hot water in the morning is advisable, although usually cold water is the better.

Q. Do you consider a spirometer or breathing tube necessary for a thorough development of the lungs?

A. A spirometer or a device of any kind is not necessary in the development of the lungs. Of course, it will enable you from time to time to test your lung capacity, and thereby will make the development of your lungs of a little more interest to you, but it is not by any means necessary. In fact, in some cases where it is used too enthusiastically, with a view to securing the largest possible expansion, injury can result just as it would from the exhaustion or over-work of any muscle or power of the body.

Q. What is your opinion of the Cartilage treatment for lengthening the body?

A. At this writing, I have not been able as yet to investigate this treatment so thoroughly as to pass a definite opinion. There is no question that, if the body is straightened and one carries himself more erectly, he will be taller than if he stoops forward and maintains an ungainly attitude. The Cartilage treatment undoubtedly will help to set up the body in a proper poise. I know one man rather prominent in the physical culture world, who claims to have increased his height one inch through a similar treatment, and, judging from this, an ordinary person, who has not already developed himself fully by physical culture exercises, probably could increase considerably more.

Q. Kindly advise treatment for hereditary gout, my wife being troubled with same in fingers, as was her mother all through life.

A. A very strict diet and bathing régime is necessary in order to cure a gouty tendency. Two meals a day, or else three very light ones, thorough mastication, avoidance of meat, tea, coffee and all stimulants, the free drinking of water, outdoor exercise and frequent bathing, would be essential.

Q. Do you advise the use of salt at all? How about pepper?

A. There is considerable divergence of opinion among authorities as to the use of salt. Some claim that a little of it is necessary, and others claim that, being a mineral, it is therefore simply stimulating waste, and is ultimately injurious. I have always used a moderate amount of salt. For several short periods, I have avoided its use, but merely as an experiment in order to determine its effects, if any. If food is eaten raw, there is little need of salt, but with cooked food, it is usually necessary in order to make the food satisfactory. It is, moreover, used in so small a quantity generally, that a discussion of its injury to the system is out of place. Pepper is a stimulant, as are all other spices, and should be avoided, though the harm it does is also of very minor importance to the problems of wholesome food and exercise.

Q. What is the value of rye flour, as compared with white flour and whole wheat?

A. Meal made from the whole grain of rye is a satisfactory food in every instance, though I do not consider it to be quite as good as the meal of whole wheat.

Q. Dr. Alexander Haig, of London, says there is poison in beans, advising people not to eat them. Kindly give your opinion of the matter.

A. Fully-matured dried beans (not green), I consider to be one of the most nourishing foods in the vegetable kingdom. They are two or three times as nourishing, pound for pound, as is meat. Frequently, I have eaten nothing else for a meal. In fact, on one occasion, I lived on them almost exclusively for two or three weeks. If mixed with tomatoes, after being simmered (never boiled) until soft, and flavored with onions, they are about the most palatable and nourishing food that can be secured in the vegetarian dietary.

Q. Kindly give value of sugar and cheese.

A. It is usually best to avoid sugar. Sufficient should be derived from the fruits and other foods we eat to supply the system. In case of a very strong craving for sweets, honey is the best that can be used. Cheese, that has not reached the mouldy stage, is rich in nourishment, and is easily digested, if one exercises or otherwise leads an active life. If the digestion is weak, it should be used with considerable care.

Q. How can I strengthen and preserve the teeth? Should one chew something hard? I use cool water and brush, although water seems insufficient to remove all matter. Do you advise a paste?

A. Thorough chewing of your food is usually sufficient to keep your teeth hard and solid. Powdered chalk makes about the best tooth powder. The use of silk floss between the teeth once or twice a week is advisable if one desires to keep them free from decay.

Q. We have formed a running club, running several miles each evening in the country. How long should this be kept up through the winter? Is the cold air harmful?

A. Cold air is decidedly *beneficial*. It would be of undoubted benefit if your running were to continue all winter, although, of course, it might be advisable to avoid those evenings when the weather is too blustering to be comfortable. Be careful not to run too great a distance, though if you stop at the point of fatigue there is usually little danger, provided you feel healthy and vigorous at all times.

Q. Are heavy-weight exercises injurious to the system?

A. Heavy weights are not necessarily injurious, if care is used not to strain or overwork the muscles. Where one works too hard, and with too much determination, to lift a certain weight, injury not infrequently is the result.

Q. What is the value of grapes as a food? What is the proper way to eat them, removing seeds or not? Should seeds be crushed in mastication?

A. Grapes are one of the best fruit foods we have. A good grape juice is almost as nourishing as milk. It is not of very great importance whether seeds are removed or not, though most hygienists prefer to remove them.

Q. Getting home at one o'clock at night, should one take half an hour of exercise, when he will have to work all the next day and half the night following?

A. Under circumstances of this character, I would not advise more exercise than can be secured in the movements illustrated in the January issue of this magazine, while taking off your clothes. The exercises will be decidedly beneficial, as they give relaxation from the strain of the overwork you mention.

Q. Is locomotor ataxia curable by physical culture methods?

A. Locomotor ataxia is curable by natural means. A long régime is necessary in order to bring about satisfactory results. A good teacher or natural cure physician should be employed.

WEEKLY MENUS OF UNCOOKED FOODS

USE AND VALUE OF NATURAL FOOD AND SOME PLAIN AND PRACTICAL DIRECTIONS FOR ITS PREPARATION

By Amelia M. Calkins

THIS IS THE SECOND OF A SERIES OF WEEKLY MENUS WHICH BEGAN WITH THE JANUARY ISSUE

So many inquiries have been received for more detailed information of the uncooked diet that I have arranged for a series to appear monthly during this year. As the author says, some cooked foods can be added to each meal if desired. In fact, it would no doubt be better to use some cooked food with each meal in the beginning if not accustomed to following an uncooked diet.—BERNARR MACFADDEN

ONCE upon a time, so the story goes, a man who had thought sat on a fence overlooking a field of fallow ground, made ready for sowing. He had taken a long walk, and, swinging himself lightly up to the top rail, sat eating a handful of whole or natural wheat. A man who had not thought, or had followed the routine of his grandfathers in thinking, as in farming, approached with a bag full of wheat of similar kind, with which he proposed to sow the field, but first said:

"Why do you not have that wheat cooked before you eat it?"

The answer came as a question: "Why do you not have your wheat cooked?"

"Why, because its life would be destroyed—its value for growing wasted."

Then said the man who had thought: "That is my belief. The waste of my body is so much more easily rebuilt by the use of this perfect grain than after the milling process has robbed it of more than half its value, as is proven by the small amount necessary to satisfy the appetite if eaten uncooked." "Why," said he, seeing the farmer at last looked interested, "there was a man I knew who lived for three months on three ounces of uncooked wheat for each meal of every day. His friends said he was a fool to try such an experiment, and predicted he would die; but they were compelled to change their minds when they found he had gained two pounds in that time, and felt and looked well."

However, such a bill of fare would hold only as an experiment, proving the superiority of undestroyed cell life in food used to build up cellular tissue of human beings. A small amount of whole wheat will do where strong natural teeth are denied, but even then the wheat should be held in the mouth for a short time before mastication, thus softening the grains in order to avoid too much tax upon teeth accustomed only to cooked foods. As persons who adopt natural or uncooked food usually adopt the two-meal system, we give below menus for each day of the week:

MONDAY.

FIRST MEAL.—APPLES, baked, and eaten with cream; or, better yet, eaten with cream without being baked.

The apples may also be cut in small pieces, and if the skin is tender, as with the Snow apple, and some Greenings, do not remove the skins, but wash carefully, and mix with raisins, cut into. Serve with cream.

WHEAT, coarsely ground in coffee mill, and mixed with figs, cut in small pieces, and pecan nuts. Use with this the Thomas bread (unfermented), two or three cakes of which, it is claimed, are sufficient in the way of nutrition for one meal.

HOT LEMONADE.

SECOND MEAL.—SOUP OF FRENCH PEAS—To two quarts of milk and water add butter, salt and pepper. When thor-

oughly heated (but not boiled), add one can of French peas, and when all is thoroughly heated serve with zweiback of brown bread.

SALAD—One-half dozen bananas, sliced; three juicy apples, cut in thin slices, or "chipped;" one lemon; teaspoonful of sugar; saltspoon of salt; two spoonfuls best olive oil, and one-half cupful butternuts or pecans. Serve on lettuce leaves or watercress, when obtainable, but if away from market these salads can be used most satisfactorily with the fruit and nuts only.

SHREDDED WHEAT BISCUIT—**WHEAT MEAL BISCUIT**—A spoonful of natural grains of wheat to which add raisins or nuts; while the latter are being masticated allow the wheat to remain in the mouth subject to the action of the salivary glands, which act aids the process of digestion of whatever food is taken.

DESSERT—Figs, cut in small pieces, added to apples, chopped, not too fine; add sugar to taste, and serve with hot milk or cream.

TUESDAY.

FIRST MEAL.—BANANAS, COFFEE, GRAPE FRUIT, GRAPE NUTS AND ORANGES. TRISCUIT AND FIGS AND CREAM.

SECOND MEAL.—**SOUP**—POTATO, CARROT AND CELERY.

Grate a potato and a small carrot. Soak all night in one quart of milk and water. Cut a stalk of celery in small pieces, add butter and salt to taste. Place over the fire, and when thoroughly heated, serve, with olives on the side.

SALAD—Brazilian nuts, chopped, one-half cupful; one purple yam; one large grape-fruit; three dozen white grapes, seeded; one lemon, juice and pulp; one dessertspoonful of sugar; very little salt; large tablespoonful of best olive oil. Serve in the shells of the grape fruit or on watercress.

DESSERT—Sandwiches of best Graham or entire wheat bread, cut thin, and spread with guava jelly. Triscuit, spread with imperial cheese. Coffee or cocoa.

WEDNESDAY.

FIRST MEAL.—Hot water, which is especially beneficial if taken ten or fifteen minutes before eating, softening particles of food not yet digested and re-

moved, and therefore most beneficial in cases of sluggish digestion. Taking hot water, like *breathing*, and many other things called "*simple*," must be taught, as there is "a better way." Much has been said by dentists of the injury done the teeth when the hot-water fad was running its rapid course, which need not have resulted disastrously had the water been sipped from a teaspoon, at first *slowly*; but drank from the first, the hot cup, and hotter water, proved too great a tax on the enamel of many teeth. However, taken properly, it is of immense benefit. Postum, oranges, wheat, ground coarsely in a coffee mill, with chopped dates and pine nuts, may be eaten first, a portion dry, then add hot milk and cream.

Thomas bread, with honey. Raw eggs, which may be taken served like oysters, with orange juice, or whipped up in a glass of hot or cold milk.

SECOND MEAL.—**NUT CROQUETTES**—Soak one-half cup of ground wheat in one-half cup of milk for two or three hours. Add one cup of ground pecans or English walnuts, one well-beaten egg, and salt. Roll in corn meal, and brown in olive oil or butter. Serve with or without tomato dressing, which is made by adding to a small can of tomatoes one teaspoonful of sugar, one of butter, and some salt, heating it. Garnish with parsley.

CORN MEAL POPOVERS—One cup of milk, one cup of meal, one egg, well beaten, whites and yolks separately, and salt. Add yolks to meal and milk, first well beaten. Add whites last. Bake ten to twenty minutes in hot oven.

PINEAPPLE SALAD—After carefully paring, shred with a fork a fresh, ripe pineapple; add one banana, one orange, one cup of chopped almonds, one lemon, juice and pulp, dessertspoonful of sugar, a little salt, and two spoonfuls of olive oil. Serve on lettuce leaves.

FRUIT CRACKERS, OLIVES, CHEESE, HOT LEMONADE.

THURSDAY.

FIRST MEAL.—**CORN MEAL COFFEE** (for the children), **POSTUM, ORANGES, "FORCE" AND CREAM. GRAHAM GEMS AND UNCOOKED BREAD. FIGS.**

SECOND MEAL.—**TOMATO SOUP**, with brownbread croutons, small squares of toasted bread. **OLIVES AND CELERY.**

VEGETABLE SALAD—Arrange sixteen small crisp leaves of lettuce on a platter, putting two leaves together to form a shell; chop a small head of crisp cabbage, stalk of celery, and small onion, together, and season with salt and pepper; add spoonful of mayonnaise dressing to one-half cup of cream, whipped up with the white of one egg and a teaspoonful of powdered sugar. Fill the lettuce leaves, and surround all with spoonfuls of dressing. Garnish the whole with half circles of beet and parsley. Serve with triscuit.

DESSERT—Grapes, cheese sandwiches, coffee.

FRIDAY.

FIRST MEAL.—**HOT LEMONADE**—Twice the amount of much better lemonade can be made from the same number of lemons and oranges if the following rule is observed: Squeeze the juice from three lemons and one orange, and set aside. First, however, mash the fruit thoroughly. The same care should always be taken where the skins of fruit are used, and it is well known that much that is desirable is lost when apples are pared; and in lemons and oranges the volatile, aromatic oil is in the peels, and should not be lost. Therefore, cut the three lemons and one orange into small pieces, cover with sugar, and let stand for about an hour; then press out the juice the sugar has extracted, and add it to three pints of hot water, sweeten to the taste, and serve. It can be poured very hot into glasses, if a teaspoon is first placed in the glass, but a cup is more convenient.

THOMAS BREAD, SHREDDED WHEAT BISCUIT, DATES, stuffed with English walnuts. **APRICOTS**, soaked for two or three hours and chopped with almonds. Serve with cream or hot milk.

SECOND MEAL.—**OYSTERS, CREAM OF TOMATO SOUP, LETTUCE AND WATER-CRESS SANDWICHES**. Shred the water-cress and lettuce. Spread slices of Boston brown bread, first with peanut butter mixed with olive oil; then lay on the lettuce or cress, mixed with mayonnaise or French dressing.

CHEESE FONDU—Two cups of cheese, one cup of milk; cut the cheese in small pieces, or, if old, grate it. Add the milk, and put in a pan, over the fire, or in a

chafing-dish. Stir until the cheese is dissolved; then add one well-beaten egg, and stir for five to seven minutes. Season according to taste. Serve on toast or crackers, and eat immediately.

DESSERT—**PRUNE PUDDING**—Take one pound of best prunes, soaked over night, after first being carefully washed, and remove the stones; chop, and stir in thoroughly one-half cup of sugar. Beat well the whites and yolks of three or four eggs, separately; add whites last with teaspoonful of vanilla extract with the yolks. A portion of the whites, with powdered sugar, may be used to garnish the top of the pudding. The flavor of the prunes is much finer than when stewed.

SATURDAY.

FIRST MEAL.—**HOT WATER, POSTUM, GRAPE FRUIT, APPLES**.

NATURAL WHEAT, ground, and mixed with raisins, chopped prunes and walnuts. Serve with hot milk or cream.

GRAHAM GEMS, BAKED POTATOES. Anyone having a base-burner stove will find the ashpan below a fine place for roasting potatoes. Eggs also can be wrapped in wet paper and roasted in the same way.

SECOND MEAL.—**BARLEY SOUP**—Soak two spoonfuls of barley in milk or water all night. To one quart of milk add the barley, a few drops of celery extract, and a teaspoonful of catsup. Serve when very hot, with wheat meal biscuit spread with peanut butter.

BEAN AND BEET SALAD—Cut a pint of beans lengthwise; stew in slightly salted water until tender; drain. Select a crisp, hard head of cabbage and arrange the inner curved leaves in platter; add beans and mayonnaise dressing. Cut beets to form petals, and arrange like roses, with stems of parsley. Both beautiful and good!

NUTS, FIGS AND APPLES—Chop nuts and figs (Brazilian and pine nuts). Place on saucers. Cut apples around in thin slices, first removing skins (unless very tender apples) and cores. Lay them around edge of dishes, putting a blanched filbert in the center of each slice of apple. Serve with whipped cream, to which add the white of an egg, well beaten, white wine or almond flavoring, and powdered sugar.

SUNDAY.

FIRST MEAL.—COFFEE, HOT WATER.

OATMEAL GRUEL—Scotch oats, washed, and soaked all night in milk, to which add best prunes, soaked all night, and chopped. Serve with hot milk or cream.

GRAHAM GEMS—One cup of milk; stir vigorously into it one cup of Graham flour held high to be filled with air; beat together five minutes, adding salt. Have iron Gem pans hissing hot. Bake twenty minutes.

RAW EGGS—Taken with pinch of salt, or beaten up in glass of milk, either hot or cold.

ORANGES.

SECOND MEAL.—BOUILLION—Served in cups, with crackers and olives.

SALAD OF CHERRIES AND FILBERTS—Remove the pits from one can of white and one can of red cherries. Blanche a

pound of filberts and fill cherries with same. Let stand for two hours. Serve on crisp lettuce leaves, with mayonnaise dressing. To the mayonnaise add a dessertspoonful of powdered sugar, or, if preferred, a dressing of whipped cream, sour or sweet, with small teaspoonful of mustard; sugar, salt and dash of paprika, can be used.

WHEAT MEAL AND OATMEAL CRACKERS, THOMAS BREAD.

DESSERT—TUTTI-FRUTTI JELLY—Soak one box of gelatine in one-half pint of cold water for two or three hours; dissolve with one pint of boiling water. Add the juice of three lemons and one and one-half cups of sugar. Strain. When beginning to stiffen put a layer of jelly in a dish, then a layer of sliced bananas, another layer of jelly, one of sliced oranges, one of jelly, and one of grated cocoanut. Finish with jelly.

FRUIT CRACKERS AND NABISCO.

PHYSICAL CULTURE HAS TAUGHT HIM TO UNDERSTAND AND REVERE THE RESPONSIBILITIES OF THE HOME

To the Editor:

I am a regular reader of PHYSICAL CULTURE, and while I have not been able to follow your instructions in detail, I have ever found it a source of great help to me. I have implicit confidence in your methods, and believe you are fighting a grand and glorious battle.

I am a young man, and not married, but my conception of marital relations, founded as they are on what I have learned

from you, are pure and earnest. If I could not be a clean, healthy father, and if I could not find a young woman with the same high view of healthy motherhood, I would decline to add to the misery of this sad world by bringing into it innocent, helpless children.

Wishing you god-speed in all you undertake, I am,

FREDERICK N. FRAM.

Illinois.

"THE SMILE THAT WON'T COME OFF"

HEAVEN'S GREATEST GIFT.

"I tell you," exclaimed the slim man, "water is Heaven's greatest gift to man."

"Ah, you are a prohibitionist?"

"No sir," was the contemptuous reply. "I sell milk."—Columbus State Journal.

SPIRITS.

"What did the deacon say when you sent him the brandied peaches?"

"He said he did not care so much for the peaches as he did the spirit in which they were sent."—Judge.

DIS NEW FEEZICAL CULTURE CRAZINESS.

My boy reads mit your book und den tells me dat ven I drink beer der overcoat from my stummack gets too thick. Please be so kind und intervere not mit my family affairs: what!

Elsie—There's a man at the door, pa, who says he wants to "see the boss of the house."

Father—Tell your mother.

Mother (calling down stairs)—Tell Bridget.—Philadelphia Press.

THE DREAD OF MOTHERHOOD

INFANT MURDER AND CONTEMPTIBLE CRIMINALS WHO ADVERTISE THEIR PRACTICE

By *Dr. A. Wilbur Jackson*

F. S. SC. (LONDON), MEMBER OF THE SOC. D'ELECTRO THERAPIE (PARIS, ETC.)

IN view of the widely-discussed question of race deterioration of late, that has been attracting much attention, it may not be amiss to draw the attention of readers to some facts on the subject of motherhood.

The "dread of motherhood" is one of the most fruitful causes of race deterioration, and, indirectly, of actual crime. It seems to have become "unfashionable"—Heaven save the mark!—for a woman to rear a family of children. What was once the brightest jewel in a woman's crown of completed happiness has become now a thing to be avoided at all hazards. The modern society woman has no time to devote to the nursing and the bringing up of children. Either she takes any kind of measures to prevent the possibility of becoming a mother, or else, when she discovers that all her precautions have been in vain, she resorts to someone who makes a business of infant murder, and who disposes of the fruit of her indulgence by unlawful means.

Thousands of women do this body and soul destroying thing; not once or twice, but time after time, until nature exacts her penalty; and when the unfortunate woman desires at last that her offspring shall live and thrive to be a stay and comfort in after years, naught but disappointment ensues, and all because the progeny of an unnatural woman who has undergone such a series of ordeals cannot be healthy or normal, and lives only to grow up a helpless, brainless imbecile, and to procreate offspring weaker and more degenerate than itself.

That this slaughter of the innocents goes on to an appalling extent is well known to every medical man who has given the subject any attention. The columns of certain of our daily newspapers teem with thinly-veiled invitations to women to resort to certain practitioners who advertise that they can and will re-

move all "obstructions" and "irregularities" "without pain or danger." Some of these advertisements are headed with the names both of a physician and of some woman, presumably his wife, as "Doctor and Mrs. Blank."

These contemptible criminals are ready to perform illegal operations for almost any fee they can collect, from ten dollars upward. Most of them advertise the fact that the patient may obtain board and all other accommodations as long as she requires it. When matters have progressed too far for the illegal operation to be risked, these advertisers guarantee to procure the adoption or other disposal of the unfortunate little waif that *lust* and *selfishness* have doomed to so sad a fate.

Some of these concerns are run on very expensive lines, and are veritable palaces of luxury; though none but the wealthiest sinners can command such accommodations. These latter concerns do not advertise, as a rule, in the public prints, but send out circulars, and so on, to the members of the medical profession, offering to do the dirty work for the practitioner who is too cowardly to do it for himself. It is only two days ago that one of the best-known of these dens was raided by the officials of the County Medical Society, aided by the district attorney and the police. The doctor was caught red-handed, with five hundred dollars in marked bills in his possession. Yet when arraigned in court he was held in only one thousand dollars bonds. He is free now to jump this bail and to go away until the affair has "blown over." His counsel is said to have stated that the arrest was illegal, and that he would get back at the parties who caused it, and would make them rue the day when they molested his client.

Some technicality, we suppose, will be sprung, and the doctor will escape punishment, as he has done twice heretofore;

although every one—court, lawyers, police, district attorney and the public—knows him to be an abortionist pure and simple.

Every year or two one of these more prosperous and wealthy members of the guild is arrested, and perhaps indicted; but to arrest is one thing, and to punish is another. The small fry go on year in and year out, and no attempt seems to be made to interfere with them. If we are to endeavor to find the surest and quickest remedy for "race deterioration," one of the first factors in the remedy will be the enlightenment of women—yes, and of men, too!—regarding their obligations as possible parents.

In the first place, the subject of sex relationship *must* be better understood. The woman who marries believing that she must submit to any and every demand made upon her by a possibly thor-

oughly low and brutal animal husband, marries under terribly degrading conditions, both physically and morally. She is sure to develop in time serious uterine and other diseases, and is certain to be a very unhappy wife, despising and hating her husband.

The, to most women, much dreaded ordeal of childbirth need carry no terror with it if judicious physical exercise and diet be followed out.

No man worthy of the name would, if he knew it, make of marital relationship a source of real mental degradation and physical suffering to his wife. If he realizes that she submitted simply through a mistaken sense of duty, or a foolish desire to placate him, he would undoubtedly govern himself accordingly, and both parties would be the happier for it.

SOMETHING NEW IN ANATOMY

Teacher of Physiology—Can you name any of the organs of the body, Willie?

Willie (hesitatingly)—I only know two.

Teacher—What are they?

Willie—Hand organ and pipe organ.—*Maud Johnson.*



The Children Are Left to the Care of the Maid While the Wet-nosed Poodle Has the Best Time in His Life

“THE MISSING LINK”

THE GORILLA'S MARVELOUS STRENGTH

By *F. Walter Smithson*

One of the most remarkable and mysterious animals known to man is the gorilla. His strength equals, or is greater than, that of the lion. The photographs published herewith show a development of chest and arms that makes the tales of his great muscular power easy of belief.—BERNARD MACFADDEN.



WHAT animal is most like to a man or woman has been a question of long and serious debate. Serio-comic is a better word, unless you agree on the kind of resemblance sought. For intellectual and moral likeness, the dog has the popular vote; but then the dog has been trained and chummed into his humanity for untold

The Massive Development of the Gorilla

ages. For linguistic aptitude, we have, in the order named, the woman, the man, and the parrot; but here again education carries the day. Candidates for one humanlike pre-eminence and another are found everywhere; in the elephant, the horse, the mule, the beaver, the cat, many birds, and so on down to the little ant, “some of whose performances are absolutely startling, so closely do they resemble

the customs of human civilization."

The most noticeable general likeness to man is found in the tailless or anthropoid apes: the gorilla, the chimpanzee, the orang-outang, and the several species of gibbons. The "man-monkey" was seen

by Hanno the Carthaginian, during the earliest recorded expedition down the west coast of Africa, somewhere about 350 B. C., and since then wonderful stories have been told of immense humanlike apes in those tropical parts of the world.



Showing the Great Breadth of Shoulders and Chest

These stories were long the subject of ridicule. Even the testimony of men like Du Chaillu and Livingstone was doubted, until photography, in the remaining case of the gorilla, has proved at last the existence of this monster.

The gorilla, so far as is known, lives a solitary life in the dense and dark forests of West Africa, between the Congo and the Camaroons. He is found only where fresh water is abundant. His food is exclusively fruitarian and vegetarian. He is very fond of fruits and the fleshy parts of certain leaves, such as those of the

deeply sunk, the ridge of the skull projecting above them; the teeth are frequently exhibited; there is the savage scowl, the general aspect of ferocity, the terrific roar emitted when he is enraged. All these characteristics tend to enhance the sentiment of dread in which the gorilla is held by the natives.

This animal will hang silently from a limb, we are told, and thus catch a passerby and choke him to death. He carries off women and detains them in his forest home. We read in "Purchas, His Pilgrimes," that about 1613, A.D., a gorilla—



Clothe This Figure and the Similarity Would Be Striking With That of a Bowery Tough



A Chimpanzee that Looks Like a Bad-Tempered Man

pineapple. With his powerful jaws and teeth he tears any vegetable substance and cracks nuts that would resist the blows of a heavy hammer. His bulk exceeds that of a man; but his legs are short, so that in height and build he is like a very heavy, stocky man. His strength is in proportion to his immense size. The muscular power of his limbs is enormous.

The gorilla's hands are remarkable for their great size, their thickness, and their strength. He can defend himself against almost any beast of prey. When wounded he is much more terrible than the lion. He can twist a musket barrel in his jaws, and the strongest man would be a mere plaything in his hands. His eyes are

there called a pongo—stole from an Englishman living in Congo a negro boy, who lived a month with his captor. This certainly indicates intelligence; and though the gorilla has never yet been tamed, it is believed that when man shall have succeeded in bestowing upon him a careful training similar to that which he now gives to sporting dogs, race horses, working elephants, and song birds, his mental and moral aptitudes will be developed to an extent of which at present we have scarcely an idea; that he will take rank next to man in moral and intellectual power, as well as in aspect and structure.

The chimpanzee is also West African. He is the cleverest and most like man

of all the apes. He lives in societies, building huts of bark, branches and leaves, where all unite to defend their homes, driving off even elephants with clubs and stones. The chimpanzee lives on fruits and other vegetable substances, but he is playful, his disposition is lively, and unfortunately he soon learns to eat with our spoons, to drink from our glasses, and to love the candies and wines of civilization. Otherwise he is very intelligent, and is doubtless capable of indefinite development.

The orang-outang and the gibbons inhabit the coasts of southeastern Asia and the adjacent islands. The former is

ground, however, their appearance is that of a man with abnormally long arms. They are gentle and easily tamed. They are vegetable feeders, but less exclusively so than are the other anthropoids. Their natural food is fruits, roots, bulbs, and the like; but they will eat eggs and insects. Their activity is surprising, and owing to the length of arm the distances to which they can swing themselves are remarkable, some of them having been



Massive Muscular Development Solely On a Nut and Fruit Diet



The Orang-Outang Specimen Shows the Enormous Lateral Expansion of the Cheeks

named from two Malayan words, meaning "man," *orang*, and "wild," *outang*. He is stronger than the chimpanzee, and resembles man less in some respects and more in others than do either the chimpanzee or the gorilla. He builds a nest in a tree and seldom leaves it, staying much alone with his wife and children, and living almost exclusively on fruits, nuts and tender shoots. He may be tamed, however, and in captivity he is affectionate, though always sedate and grave.

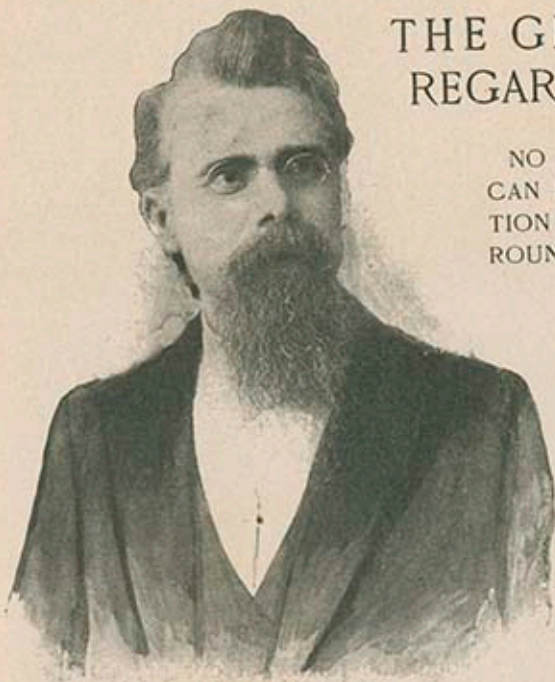
The gibbons also are arboreal, and very seldom leave the tree. When upon the

seen to clear forty feet between limb and limb.

All the anthropoid apes, it may be said in brief, are of great physical strength; they are vegetarian by inheritance and by preference, and are probably capable of a surprising mental and moral development.

Will it not be worth while for man to tame and educate the anthropoids, and in turn to learn something useful from the systems of living that have given these anthropoids such tremendous physical powers?

THE GERM FALLACY IN REGARD TO CONTAGION



M. J. Rodermund, M. D., Who Claims to be the First Physician to Prove the Fallacy of the Germ Theory

THE above statement may be revolutionary, nevertheless it is a natural law of the human body. Every individual ought to understand the laws of his being and their relation to his surroundings. I do not present this new and revolutionary question to the public as a new theory, assumption, or supposition. It can be demonstrated at any time beyond the question of a doubt upon either the human being or the living animal. It is an absolute natural and physiological law. If this is true the reader will see at a glance that every fundamental principle taught and believed to-day in regard to the cause, prevention, and treatment of disease is *wrong* and *injurious* to mankind.

Do not observation, experience, and everyday life show that something is radically wrong somewhere? Movement in medical science has been backward and not forward. We have been sliding down hill instead of striding up hill. No wonder we have gone so rapidly! The old

NO IMPURITIES, GERMS OR POISONS CAN BE TAKEN INTO THE CIRCULATION OF THE BLOOD FROM OUR SURROUNDINGS BY BREATHING

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*M. J. Rodermund, M. D.,
Milwaukee, Wis.*

superstitions and incantations of mediæval times were far superior to our present false theories, for they at least did not ruin the constitution and thus shorten the possibilities of a long life.

I have employed methods during a period of three years to demonstrate the absolute certainty of this law of the human body. I want to call attention to the fact that a few minutes of reasoning will convince any

person that if our present beliefs and teachings of the medical profession are true, namely, that germs and other poisons were taken into the circulation by breathing (even if it were only the minutest imaginable quantity with each breath), it would be an impossibility to prevent disease, especially in the large cities. Yes, the world would be depopulated in less than ninety days.

Nature's laws of the human body and all else in this great universe go on in their old way, no matter what false and ridiculous ideas, theories, or statute laws the doctors and medical scientists may formulate. The discovery of the law above stated, when fully understood, will clear up more false theories and will benefit the human race more than any discovery made in centuries. In fact, its value cannot be estimated at present.

That germs are the cause of disease is an accepted doctrine of the medical profession, and is generally upheld by the public; but I have proven that germs are

not the cause of disease. Logic and experience always made the germ theory appear so foolish to me that I determined to know the truth. My experiments were many and thorough, extending through a period of three years, and they have proved the benevolent design in Nature's laws for mankind, together with their perfect adaptation to each other. To describe all the experiments in detail would take a volume, yet I think it can be made perfectly clear by describing the following experiment upon myself, in which I was subjected to extreme tests under various conditions.

First.—By taking a pair of lungs thoroughly diseased with tuberculosis (consumption) and exposing them under my very nose for three or four weeks at a time, keeping myself under observation from three to six months afterward. As there are differences of opinion among medical men as to whether or not it is the moist or dry condition of diseased lungs that produces the so-called contagion, I took diseased lungs and put them in a favorable place to allow them to dry slowly to the point where some of it could be pulverized. I then blew it into the nose, as above stated, every day for two or three weeks. These experiments were repeated over and over again. Further, the poisons and germs, both in the moist and dry condition, were forced into the small air tubes of the lungs, and the blood of animals experimented upon was examined before and after the experiments, and also days and weeks afterward, but only to find that none of it had entered the blood.

Perhaps the reader will criticise, and even say it was wrong to apply the tests upon a human being. But I knew I was taking no chances, and did it principally as a matter of record. I had no hesitation to apply them to my family, and afterward upon seventeen people between the ages of fifteen and thirty years. But in neither case could a single case of consumption be developed. The same kind of experiments were made upon hundreds during my years of practice with diphtheria, scarlet fever and smallpox poisons, with the same results.

Why, I ask, do physicians and scientists claim, and make the public believe, that they are producing these diseases in ani-

mals every day, and I fail to produce any of these diseases in years of practice and experiments? Again I ask, why is this true? Here is the answer: These wonderful men use a hypodermic syringe to inject these poisons or germs into the blood of the subject. Did anyone ever see hypodermic syringes flying around in the air, injecting consumption or smallpox poison into the blood of mankind? Several hundred millions of people with open eyes have swallowed blindly and believed this rotten and unscientific teaching, while professors of medical colleges have admitted privately to me that I am right, but they could keep on fooling the people just the same! When will the people rise to their own emancipation from this bondage of fraud and deception imposed upon them by an honored but not honorable body of men?

When it is remembered that one of the prime functions of the lungs is to give off these same poisons from the blood that we are taught are taken into the blood, the fallacy of our present theory becomes clear. All well-known laws of nature are and necessarily must be corroborative. Any thinking mind will plainly see that these physiological laws cannot be otherwise. Yet they have been hidden in darkness for nineteen hundred years, and have caused many false notions and theories in regard to health, life and disease.

No poisons, germs, or impurities from the air can be taken into the blood from our surroundings by breathing or otherwise, unless produced by some mechanical means. The power instrumental in causing the blood to circulate in the body is taken from the air breathed. I will finally clear up this wonderful mystery that has baffled mankind in all ages, viz.: The cause and prevention of disease. It clearly shows that all disease, local or epidemic, is formed from conditions within the body due to the action of the atmosphere upon the functions of the body and to our own acts, or to a combination of both, which causes the retention of our own systemic poisons. The eruptions upon the body in scarlet fever, measles, smallpox, yellow fever, etc., are the cure and not the disease. These eruptions are composed of combinations of the same iden-

tical poisons that the body throws off in health, differing in degree only.

This is the whole thing in a nutshell. It proves, first, and all tests will substantiate it, that no disease ever was, ever can, or ever will be contagious. Second, that vaccination has been one of the greatest crimes ever imposed upon mankind. Third, that quarantine is wrong and injurious. Fourth, that germs are the result of disease and not the cause; and

lastly, that the imposition practiced upon the public by the medical profession is far worse than the superstitions and incantations of the heathen in India and China. The fallacies and foolish ideas of Christian Science, Faith Cures, and Dowieism, are probably due, more than to anything else, to the restless dissatisfaction that instinct has given to people when they try to follow the present practice of medicine.

A DELICATE BOY DEVELOPED INTO A STRONG MAN BY DEEP BREATHING



Photo of E. H. Selleck, New York City

AT six years of age Mr. Selleck was considered an extremely delicate child. He was taken in hand earnestly by his father, who had more faith in fresh air than in medicine, and every morning the weak boy was taken to a vacant field and ordered to "Throw back your shoulders, close your mouth, and breathe!" This was done often to the length of half an hour or more, and was considered a great hardship by the lad. With time, and beneficial results in health, it became a pleasure, and Mr. Selleck continues to this day to practice the exercise before an open window each morning and night.

In the examination before the Examining Board of Surgeons during the Spanish-American War, in which Mr. Selleck served his country, it was reported by the board that out of 35,000 men examined they did not meet with one man who possessed a chest development equal to that of Mr. Selleck.

In speaking of his chest expansion, Mr. Selleck says: "I know of no reason why any sickly boy cannot attain the same result, no matter how weak, if he follows deep breathing exercises faithfully and persistently."

THE WORLD'S GREATEST SCIENTIST ON VACCINATION

By the Late Herbert Spencer

IN "FACTS AND COMMENTS"

A PARLIAMENTARY Return issued in 1880 (No. 392) shows that comparing the quinquennial periods 1847-1851 and 1874-1878 there was in the latter a diminution in the deaths from all causes of infants under one year old of 6,600 per million births per annum; while the mortality caused by eight specified diseases, either directly communicable or exacerbated by the effects of vaccination, increased from 20,524 to 41,353 per million births per annum—more than double. It is clear that far more were killed by these other diseases than were saved from smallpox.

This was in the days of arm-to-arm vaccination, when medical men were certain that other diseases (syphilis, for instance) could not be communicated through the vaccine virus. Anyone who looks into the Transactions of the Epidemiological Society of some thirty years ago will find that they were suddenly convinced to the contrary by a dreadful case of wholesale syphilization. In these days of calf-lymph vaccination such dangers are excluded; not that of bovine tuberculosis, however. But I name the fact as showing what amount of faith is to be placed in medical opinion.

To the communication of diseases thus demonstrated, must be added accompanying effects. It is held that the immunity produced by vaccination implies some change in the components of the body; a necessary assumption. But now if the substances composing the body, solid or liquid, or both, have been so modified as to leave them no longer liable to smallpox, is the modification otherwise inoperative? Will anyone dare to say that it produces no further effect than that of shielding the patient from a particular disease? You cannot change the constitution in relation to one invading agent

and leave it unchanged in regard to all other invading agents. What must the change be?

There are cases of unhealthy persons in whom a serious disease, as typhoid fever, is followed by improved health. But these are not normal cases; if they were, a healthy person would become more healthy by having a succession of diseases. Hence, as a constitution modified by vaccination is not made more able to resist perturbing influences in general, it must be made less able. Heat and cold and wet and atmospheric changes tend ever to disturb the balance, as do also various foods, excessive exertion, mental strain.

We have no means of measuring alterations in resisting power, and hence they commonly pass unremarked. There are, however, evidences of a general relative debility. Measles is a severer disease than it used to be, and deaths from it are very numerous. Influenza yields proof. Sixty years ago, when at long intervals an epidemic occurred, it seized but few, was not severe, and left no serious sequels; now it is permanently established, affects multitudes in extreme forms, and often leaves damaged constitutions. The disease is the same, but there is less ability to withstand it.

There are other significant facts. It is familiar biological truth that the organs of sense and the teeth arise out of the dermal layer of the embryo. Hence abnormalities affect all of them; blue-eyed cats are deaf and hairless dogs have imperfect teeth. (Origin of Species, Chap. I.) The like holds of constitutional abnormalities caused by disease. Syphilis, in its earlier stages, is a skin disease. When it is inherited the effects are malformation of teeth, and, in later years,

iritis (inflammation of the iris). Kindred relations hold with other skin diseases; instance the fact that scarlet fever is often accompanied by loosening of the teeth, and the fact that with measles often go disorders, sometimes temporary, sometimes permanent, of both eyes and ears. May it not be thus with another skin disease—that which vaccination gives?

If so, we have an explanation of the frightful degeneracy of teeth among young people in recent times; and we need not wonder at the prevalence of weak and defective eyes among them. Be these suggestions true or not, one thing is certain—the assumption that vaccination changes the constitution in relation

to smallpox and does not otherwise change it, is sheer folly.

A high authority, Sir James Paget, in his lectures (fourth edition, p. 39) says: "After the vaccine and other infectious or inoculable diseases, it is most probably not the tissues alone, but the blood, as much or more than they, in which the altered state is maintained; and in many cases it would seem that whatever materials are added to the blood the stamp once impressed by one of these specific diseases is retained." Here is a distinct admission, or rather assertion, that the constitution is changed. Is it changed for the better? If not, it must be changed for the worse.

CONSIDERED THE EDITOR A "FREAK;" NOW WISHES SUCCESS IN CONVERTING IDIOTS

To the Editor:

To be frank with you, I used to consider you a "freak," but you may see by the heading of this letter what change has taken place in my opinion of you. If you *are* a freak, I hope you will become a chronic, so that you will never be able to give up the work you are now engaged in.

Wishing you success in converting *idiots* like myself, and thanking you most heartily for the degree of health I have obtained through following your plan of living, I remain, most gratefully yours,

JOHN H. NICKERSON.

Providence, R. I.



Dorothy Berry, Pueblo, Col.

A Chubby Physical Culture Baby. Age, 8½ Months. Both of the Parents are Outdoor Enthusiasts and Live According to Wholesome Natural Methods in Diet, Exercise and Cold Water Bathing



Bessie Di Mariano. Age, 2½ years

*Anthem of the Coming Generation—Down
With the Corsets and Up With the Bells!*

EVILS OF THE TOBACCO HABIT

By Mrs. Carry A. Nation

I AM not only a reformer on the line of the licensed or unlicensed saloon, but on other evils. I believe that, on the whole, tobacco has done more harm than intoxicating drinks. The tobacco habit is followed by thirst for drink. The face of the smoker has lost the scintillations of intellect and soul it would have had if not marred by this vice. The odor of his person is vile, his blood is poisoned, his intellect is dulled.

A smoker is never a healthy man, either in body or in mind, for nicotine is a poison. Prussic acid is the only poison that is worse. Nicotine poisons the blood, dulls the brain, and is the cause of disease. The lungs of the tobacco user are black from poison, his heart action is weak, and the worst thing to contemplate in the whole matter is that these tobacco users transmit nervous diseases, epilepsy, weakened constitutions, depraved appetites and deformities of all kinds to their offspring.

Deterioration of the race is upon us, and unless there is some reform, idiocy, imbecility and extinction will be the legacy of the future generations.

A man that uses tobacco cannot have the nice moral perceptions on any point that he should have. I find him to be dulled and sluggish. The Bible says:

"If thine eye be single, thy whole body is full of light. If thine eye be evil, thy whole body is full of darkness." The use of tobacco is a vice, and to the extent of that one vice, it degrades a man. It opens the gate for other vices, for it is the gratification for one form of lust. It is a filthy habit, and I care not how often the smoker changes his clothes or washes his person, he is filthy. The

stench from his breath indicates that his body repudiates such uncleanness.

The tobacco user can never be the father of a healthy child. Therefore he is dangerous for a woman to have as a husband. If I were a young woman, I would say to the men who use tobacco and who would wish to converse with me: "Use the telephone; come no closer!" I would as soon kiss a spittoon as to kiss such a mouth. When a man begins to smoke he is taking his first lessons in drink. The two habits travel together.

A man never can attain his majority and use tobacco. He never can realize his full capabilities or his possibilities. He can always attain to a better standard without nicotine.

There is one objection that, from a business standpoint, every business man ought to make to tobacco. When he



Mrs. Carry A. Nation in Her Outdoor Costume

employs a man that uses tobacco he gets only a certain per cent. of his employee's time and of his brain, because the employee must serve his tobacco master part of his time, and when he is not smoking his mind is preoccupied because he is thinking of smoking. Consequently, he cannot concentrate his mind upon his business.

I have heard poor, silly, empty-headed women say that it is manly to smoke. If it is manly to smoke, why isn't it womanly to smoke? The tobacco habit is the reverse of manhood and destroys manhood, for manhood means strength of character, not the gratification of lust.

If tobacco is good for men, it is also good for women. I do not suppose that one could find a man so low and degraded as to walk down the street with a woman who had a cigarette or cigar in her mouth. Women should make the same standard for men that men do for women. Many women would smoke in public if men did not denounce it. **MEN WOULD QUIT SMOKING IN PUBLIC IF WOMEN DENOUNCED IT AS MUCH.**

I have heard some women say, "I like the smell of a good cigar." I never smelled a good one. It is not made. They are like snakes; they are all bad. I never knew of but one good use that tobacco was put to, and that was to kill lice on cows. My father used it for that purpose on his farm. It does kill that kind of germs.

The evil has become so common that whenever you go abroad you are compelled to breathe the contents of somebody else's mouth. It would be rude of me to take a piece of fruit out of my mouth and throw it into somebody else's mouth, but any one may throw his poisonous breath and smoke into my

mouth and I have no defense. Spitting is forbidden in the cars. Smoking is a great deal worse, but the reason why it is not denounced is that people can get a revenue from men's smoking, while they have to clean up after spitters, and there is no money in that.

I can prevent a man spitting into my mouth, but I cannot avoid his smoke. A man seems to think that he is free to project his stinking breath in my face on the streets, in hotels, in sleeping cars, coaches—indeed, in every public place. Now I would as soon smell a skunk. There is some excuse for a skunk; he can't help being one. But men have become so rank in their persons from this poisonous odor that they almost knock me down as they pass me. And when I say, "Man, don't throw that awful stench in my face," he answers, "You get away." I reply, "If I smelled as badly as you do, I would be the one to get away."

Oh, the vile cigarette! What smell can be worse and more poisonous? I feel outraged at being compelled to smell this poison on the street. I have the right to take cigars and cigarettes from men's mouths in self-defense, and they ought not to be allowed to injure themselves. "Liberty is the largest privilege to do that which is right, and the smallest to do that which is wrong." Governments are organized to take care of the governed. I believe it ought to be a crime to manufacture, barter, sell or give away cigars, cigarettes and tobacco in any form.

Oh, for the success of the Prohibition Party that will bring in reforms along these lines—and this is the only party that will do it! Tobacco degenerates body and mind. Physical and mental culture demand its discontinuance.

A MOVEMENT TO ANNIHILATE THE CIGARETTE EVIL

An endless chain has been started by the U. S. Moral Society of Philadelphia, with the hope of bringing a tremendous list of names that will clearly indicate that the great majority of American people condemn the contemptible cigarette traffic, and that as a result our Congress will be forced to recognize the call for a National law prohibiting its further sale to minors. The movement is splendid! It should shake up the law-making power of Congress as to the tendency of the times. We earnestly hope all PHYSICAL CULTURE readers will assist in this

movement. The postal to be sent to your friends should be copied as follows:

"It is intended to petition our Congress to prohibit the sale of the poisonous, character-destroying cigarette to minors. Send this postal with your name and address to U. S. Moral Society, Philadelphia, Pa., and write four or more of the postals to friends, thus forming a continuing chain. Please do not break it.

Yours for a Cleaner Manhood."

(Sender of postal must place name and address here.)



Cured "Chickenbreast" by Exercise

To the Editor:

As an old subscriber I wish to testify to the beneficial results derived from following physical culture methods. In March, 1900, I was advised by a physician to give up my trade, blacksmithing, and go to Colorado or New Mexico at once, as I was threatened with consumption. On my way home from the physician's office I saw, and bought, a copy of *PHYSICAL CULTURE* containing your exercises without apparatus. I put them into practice, and not only have I cured my very bad case of "chickenbreast," and the evils that go with it, but I have also been entirely freed from the malarial fevers which troubled me every summer and made my life a burden. It has not only been a relief from weakness and disease for me, thus helping me to earn a better living, but I can enjoy life more, especially since I need not fear any return of pulmonary troubles, for which I have a hereditary disposition.

The Raw Food Diet—Wants to Exchange Ideas

To the Editor:

After reading your magazine last spring I adopted a raw food diet, and have been greatly benefited by the change. When I began I was suffering greatly from indigestion; could not eat even the simplest food without pain. I felt better in a few days after the change, and have since lived almost entirely on raw food. Early in September I induced a friend to join me, and we are experimenting together. He, also, is greatly improved in health, and would not go back to the old diet for anything. We eat rolled wheat, rolled oats, apples, figs, raisins, bananas, eggs and milk, and although we do not always do so, we could easily live on ten cents per day each. Our favorite meal

seems to be: an egg beaten in milk, with wheat or oats; peanuts, a few figs or raisins, or an apple. Occasionally we eat a few meals of cooked food, with meat also, and can note a change for the bad each time.

We sleep with our window open, even if the thermometer registers 14 below zero, as it did a few nights ago.

J. LESLIE FORSTER.

Room 7, Duffin Block, Winnipeg, Manitoba.

P.S.—I would be glad to correspond with anyone on the subject of diet. I think an exchange of ideas on the subject would be beneficial.

Has Skin as Firm and Supple and Rosy as Athlete One-Half His Age

To the Editor:

I notice in the December, 1903, number you give some space to the great "John L.," who talks interestingly on physical culture. Allow me to tell my method for winter bathing. I am a man of over fifty, and have never missed my morning ablutions since boyhood. After rising, and five or ten minutes of extension movements, I step into a bath with perhaps not more than two inches of water about 90 degrees. I sponge the body, use soap and friction in every part; then, while the warm water is running from the bath, I attach a short length of hose to the cold water faucet, the hose having a 3-inch shower spray at the end, and spray the body while still warm. The reaction is very grateful and stimulating, a rosy glow follows, and a brisk rub-down with a rough towel completes the toilet. I have the window open while rubbing down and dressing. This I do in zero weather, and have a skin as firm and supple and rosy as an athlete one-half my age.

In the evening, I always sponge face and body with cold water just before re-

tiring, using no soap. And it is very rare indeed, whatever the troubles and annoyances of the day have been, that I do not fall asleep within two minutes after touching the pillow. Yours,

Columbus, O. ROBT. E. BRAY.

than temporary relief for the intestinal indigestion with which I suffered. There are other than health matters masterfully handled in your publications. Yours for more light in dark places,

Peru, Ind. DR. S. M. WRIGHT.

Cured Stubborn Case of Catarrh

To the Editor:

I have followed your suggestions contained in *PHYSICAL CULTURE* for the last year, and have never felt better in my life. I have cured a very stubborn case of catarrh by following your hints in regard to natural diet, exercise and bathing.

I want to heartily thank you for the help I have received from your magazines, and especially the Editorial Department and Physical Development.

ROGER B. ROOD.

No Excuse to be Fat or Ailing in Any Manner

To the Editor:

I give you herewith brief account of my transformation, which was brought about by physical culture methods. I am fifty-two years old, 5 feet 10½ inches tall.

Before Treatment — Weight, 277 pounds; waist, 52 inches; neck, 19 inches.

After Treatment of Five Months—Weight, 184 pounds; waist, 38 inches; neck, 17 inches.

Health nearly perfect. Feel as young as at twenty-five years. Slight fasting and slight muscular movements did the work, and most of it during the first three months of this time. It all came dead easy. No excuse at all for one to be fat or ailing in any manner. I believe that fasting and exercise will cure nearly all ills except broken or deformed limbs. Raw food and perfect mastication is my hobby. Yours for good health,

Mitchell, S. D. FRANK WELLER.

Saved Physician's Life

To the Editor:

I have been a subscriber to *PHYSICAL CULTURE* for one year, and a reader still longer. I want to tell you that physical culture methods and practice have saved my life. I am a physician, but have been powerless to accomplish anything further

Covered With Thick Growth of Hair from Hip Downward

To the Editor:

An incident has come under my notice that I am inclined to believe goes to prove the correctness of your theory in regard to hair culture. A friend of mine was in his college days the champion runner and all-round athlete of Toronto University. His legs from the hips downward are covered with a thick growth of hair, while his body is almost destitute of hair of any length. He himself attributes this phenomenon to the constant use of arnica and witch hazel, a hogshead of which, he says, was rubbed on his lower limbs during his athletic days. If the theory of your book be true, as I believe it is, it was rather the *rubbing* and the *constant pulling* of the hair that the rubbing caused, that lies at the bottom of this abnormal development.

I have learned many things from your books, many of which I wish I had known fifteen years ago. *I believe in your message to the world*, in so far as it goes. You invite criticism. I am a minister, and you will understand my meaning when I say, touch *PHYSICAL CULTURE* and *Beauty and Health with Christ* and I have no criticism to offer that is not favorable. Do not take me for a religious fanatic. My ambition is to be a manly Christian citizen, worthily developed physically, intellectually and spiritually. In passing this judgment I do not for a moment discount the force of your message so far as it goes. I could wish that your works were read by every one, for then this would be a better and a happier world, for thousands of erring mortals would be better and do better if they only knew.

I want to thank you for the benefit you have been to me and mine, and I expect to profit still more as I carry your suggestions more fully into practice. Sincerely yours,

EDGAR A. BROWNLEE.

Walkerton, Ont.

Child Exposed to Chickenpox

To the Editor:

Permit me to say a word in regard to the yellow fever situation in San Antonio. My oldest girl (three years) was exposed to chickenpox two days and one night, sleeping with the child that had it. I claimed she would not contract it on account of her good health, and she did not. People insisted that I quarantine my baby for nine days, which I did merely to please them and prove I was right. Truly yours for health,

H. C. Y.

San Antonio, Tex.

No Excuse for Human Scarecrows

To the Editor:

Allow me to tell what persistent following of the teachings of PHYSICAL CULTURE has done for me. It is a record of facts; and the most remarkable part of my improvement is the short time in which it has been accomplished. I grant that in the start I was skeptical, and it was some time before I could see results; but I kept at it. Went to book store and purchased the magazine regularly and selected such exercises therefrom as I was convinced would answer for my special use and practiced them regularly, and as far as I have got I am more than satisfied.

One year ago I was just what thousands of men are who follow clerking as a means of livelihood; the only difference was that I was at a disadvantage in being a small man, small boned and not having a large frame to build on in the beginning. I only weighed 118 pounds, which for my height (5 feet 6 inches) was several pounds under weight. I now weigh 133 pounds and have a splendid development. The apparatus which I used to obtain the results are only what nature has furnished every man, woman and child with, and which are plainly described in different issues of PHYSICAL CULTURE. I regret that there are not more people who will read it and faithfully follow its teachings, and I am fairly convinced that there is no excuse for human scarecrows when the rules of health and muscular development are explained so plainly and it can be so cheaply obtained. With a little perseverance any one can obtain the results that

I have, and while I value my development, that is secondary to the feeling of exhilaration and good health which the exercises and proper living contribute, and I shall never cease to remember with gratitude the good PHYSICAL CULTURE has done for me. Yours for health and strength,

J. E. SHEARER.

Benton Harbor, Mich.

Physical Culture in Salvation Army Work

To the Editor:

I am a reader of your magazine and am quite sure I received the first number that was published. I have for a number of years worked as a woman officer in the Salvation Army, but never until two years ago knew what it was to enjoy good health.

I had just received orders to leave the State where I had been working and proceed to another, and while waiting in a railway station I noticed your magazine on sale at a news stand. I purchased one and new hope sprang up within me, and I felt if I followed the advice given me in your valuable book I should be fitted physically for the work I loved so well.

I began taking exercises, used dumbbells and Indian clubs; took a cold bath every morning and adopted the two meals a day plan, and wish to say that in a few weeks' time the results were very gratifying. I have continued the exercises and am to-day in perfect health.

I firmly believe the world is being made better by your teachings, and I pray earnestly God's blessing upon your good work.

Capt. E. R.

A Newsdealer's Statement

To the Editor:

I have this much to say in consideration of your magazine, that I would not be placed back in the condition of health I had before taking up your magazine one year ago for one thousand dollars; no, not for any money. I am running a news stand in connection with my other business, and PHYSICAL CULTURE has the largest sale of any one magazine I carry, and I am constantly pushing its sale, as I fully realize its value.

Iowa.

A. F. SMITH.

Got Rid of Scarlet Fever and Gained a Fine Development Through Diet and Exercise

To the Editor:

About four years ago I saw PHYSICAL CULTURE on a news-stand and I purchased a copy. I have never missed one since that time, and do not intend to. At that time my chest measurement was 30 inches normal. Now it is 37 inches normal; expanded, 40½ inches; deflated, 33 inches. My arm at first measured about ten inches; now it measures 13½ inches. I do not remember the rest of my measurements at that time, as I have lost the record. I did not start in immediately after buying the first issue, but after reading a few numbers I bought a pair of dumb-bells and exercised for a week when I stopped until the next number of your magazine was published, which gave me renewed encouragement. This hap-hazard exercising I kept up for about a year until I joined the Central Branch, Y. M. C. A. After being a member of the Y. M. C. A. for about a year I got scarlet fever, which left me in poor shape and I was no better off physically than when I first commenced exercising. I finally got rid of the fever by exercising night and morning and eating two meals a day. I might mention that I was eating three good meals a day when I got sick. My rapid improvement gave me so much encouragement that I have scarcely missed exercising a single day. It is just one year and five months since my sickness, and I assure you that it makes me feel happy to think of the day when I first ran across PHYSICAL CULTURE. I might mention that I have fasted, dieted (not having eaten meat for over a year), and practiced everything else recommended in your magazine, and I know that it has done me a great deal of good. I am now, and have been for the past six months, living on uncooked food. I am 20 years old. My present measurements follow:

Neck, normal, 15; expanded, 15½; chest, normal, 37; expanded, 40½; deflated, 33; bicep, 13½; forearm, 11½; wrist, 7; thigh, 20½; calf, 14½; height, 5 feet 6 inches; weight, 135, stripped.

Sincerely yours,

JAMES D. McCHERRY.

Brooklyn, N. Y.

Doing Good in a Small Way

To the Editor:

Your monthly is read and re-read. I pass them around the shop. How can I help this small effort to do good after having my experience? Backache! I don't know how it feels, and I am in a stooping position all day. I am thinking very strongly of trying to educate myself as a physical director. I feel so pleased I want to help others. Do you think I am too old to start? I shall do what I can in a brotherly way anyway, and of course can do some good in the shop to help humanity. Your sincere friend,

HARRY O. WARREN.

Thousands of Young Men Who Need Physical Culture

To the Editor:

After one year of physical culture, I feel it my duty to say at least a word of praise for you. I have derived great benefit from your system of exercises, and because the reading of another's good fortune was the cause of my taking up your work, I hope this letter may be the same means of inducing some other fellow who might need the work, for God knows that there are thousands of young men who need physical culture. Wishing you much success, I beg to be, your true friend,

JOS. WINEGARDNER.

Ohio.

Located at the Extreme West of Our Country, Yet is Succeeding in Converting Dozens to Physical Culture

To the Editor:

I am pleased to write of the great benefits I have derived from physical culture. Although I am located at the extreme west of this great country, I have succeeded in converting dozens of people to the only rational method of curing and preventing the numerous ills to which the present generation is subject to, and I hope in the near future to have the pleasure of shaking the hand of the man who, in my opinion, is conferring the greatest benefit upon the human race.

J. H. KNOWLES.

Los Angeles, Cal.

THE GREAT WHITE CITY

By H. Arthur Powell

"Something practical may result, and enthusiastic followers of PHYSICAL CULTURE may have the opportunity of living in a city of their own."

Up from the realms of greed and wrong—
Out from the sway of Pain—
Leave your sighing and take to song!
The turning is near, though the lane has
been long;
And gold is the waiting grain.

Spire and minaret, shaft and dome,
Clustered against the sky,
Sun-signals flash, 'neath the cloud-waves'
comb,
To the world below: "Come home, come
home!
Why will ye sin and die?"

Never the cry of a weary child
Ridden by foul disease;
Never the sight of a man defiled
By a loathsome sore; nor a woman defiled,
Sawed, hacked, as the surgeons please.

With a purpose firm, and a motive pure,
With a resolute brow and high,
Each man disdains the miser's lure,
Knowing that health, and strength to
endure,
Alone can satisfy.

So, calmly glad, with a crystal sense
And a clear, unclouded brain,
They work; and lo! the old Greek art,
The lost ideal, the better part,
Is born anew. Gods, long gone hence,
Walk the fair earth again!



Statue of Liberty, New York Harbor

HUNTED DOWN

By John R. Coryell

CHAPTER IV.

"IT'S a beautiful afternoon, isn't it?" asked Harry.

"Yes, sir."

"I love to walk on such a day as this, don't you?" he asked, trying hard to break down the girl's evident timidity.

"If I'm not tired."

"Are you tired now? I thought you looked tired. You are the teacher in the district school, aren't you?"

"Yes, sir; and I do get pretty tired. Really, sir; you don't need to go any farther with me. I know I am spoiling your walk," she added, in a distressed tone.

He smiled in a way to send a thrill through her. He had no suspicion of being the cause of thrills, however, for she was a stranger, and an insignificant one, to him, and he could not know that he had been her hero long before this afternoon.

"You are not spoiling my walk, but giving it an added zest," he returned, politely, almost pityingly. "Anyhow, I am going home with you. Oh, by the way, my name is Thorne—Harry Thorne, to distinguish me from my father, who is Henry."

"Yes, sir; I knew your name; I've seen you out walking. My name is Ruth Warner. I've taught school here for nearly a year."

"I should think it would be awfully tiresome. Why, some of the scholars must be as old as you."

"Yes, sir; older. But I'm seventeen. I know I look younger."

Harry looked at her critically. She might not really look younger in one way, but physically she might have been fifteen, and backward even at that. She was slight, a little stooped, pale and de-vitalized. And yet—

She felt his glance hovering over her, and looked up timidly, her big, blue eyes charged, in spite of her, with the secret of her poor little heart. Harry was conscious of no secret revealed there, but he was conscious of a sweet, pure nature in her and of a sudden liking in himself.

And, at that, he wanted to help her to be something better than a weakling. Besides, like other enthusiasts, he had the proselytizing fever in his blood. She needed her lungs filled with fresh air; she needed exercise; she must get those corsets off; no doubt she ate too much and of improper food.

"Yes," he said, judicially, "you look younger. I suppose that is partly because you are so puny."

"Puny!" She started and betrayed a little resentment in her tone.

"I mean you are not large. I hope I have not hurt your feelings."

"No, O no! I know I am small"

She sighed softly, and walked with her eyes bent earthward. Harry pursued his thought eagerly.

"Have you ever seen Elizabeth Mowbray?"

"That magnificent creature who—"

"That is the one," laughed Harry, with a note of exultation in his tone. "Magnificent describes her. Well, she shows what a girl may be if she will breathe properly, eat properly, exercise—"

"She's very rich, isn't she?" Ruth interposed, quietly.

"Why, yes. I see what you mean; but really, Miss Warner, one may be never so poor, and yet breathe and exercise and eat properly. And there is another thing; you couldn't persuade Elizabeth—"

"You seem to be very intimate," interposed Ruth.

"Rather intimate," laughed Harry; "we're going to be married."

"Oh!" murmured Ruth, in so low a tone that Harry hardly caught the exclamation. "You must love her dearly."

"Love her!" and Harry introduced an appreciable quantity of scorn into his light laugh; "why, I don't suppose I love her at all, in the way you mean. We don't believe in that sort of thing, in fact. Of course, I like her and respect her; it would be impossible not to. Why, Miss Warner, Elizabeth can push a hundred pounds up with one hand. Push it, mind you!"

Ruth seemed quite unimpressed by the

fact of the pounds being pushed, but was looking up at Harry with those great eyes of hers full of pity and distress.

"And you would marry without love?" she asked, as if incredulous in spite of his assurance.

"Now, you know, Miss Warner," laughed Harry, "I can't stop to explain that to you to-day, but some day I will, if you like. The fact is that I believe with father that love is a very poor foundation for marriage to rest on. But what I was going to say is that Elizabeth, who, as you say, has a magnificent physique, would as soon think of gradually choking herself to death with a hangman's noose as of deforming herself with those corsets."

Ruth's face flushed, and she drew herself up indignantly.

"If you please, Mr. Thorne," she said, icily, "we won't discuss that subject. Whatever Miss Mowbray's idiosyncracies may be, they do not interest me. And I think I won't trouble you any more. I am boarding at that farmhouse, and shall be quite safe, I am sure. I hope you will believe," she added, softening, "that I am very grateful to you for your help this afternoon."

"You are angry with me," cried Harry, feelingly. "I beg you to believe I did not mean to say anything to offend you. I was full of my subject, and I forgot that women generally think it immodest to discuss this particular article of dress. Don't you see," he went on, eagerly, when she was slow to answer, "that we feel that it is a real crime to do anything to injure the health. And you surely will admit that corsets do——"

Little Ruth's head was up, and her eyes flaming finely, as she broke in vehemently:

"I'll tell you what I see, Mr. Thorne. You thrust your opinion on me, so no apology is needed if I thrust mine on you. You talk about a crime against the body. Why, you might indulge in every abomination of the savages the world over, so far as injury to the body is concerned, and not be one-quarter as culpable as you are with your intention to marry without love. That is a horrible crime, if you will. Oh! I don't believe you will do it."

"But I shall. If you will only let me explain."

"No; I don't want to hear your explanation. Marriage without love is horror, it is profanation, it is—it is—well, it is the degradation of manhood and womanhood; it is—yes, I'll say it—it is prostitution! I want to say good afternoon, Mr. Thorne," she ended, with a catch in her voice.

Harry stood dumbfounded, watching her hurrying off; then he collected his wits and in a moment was by her side.

"I'm not going to let you go like this, Miss Warner," he said. "I ought never to have begun the discussion. Dad always says it's a mistake to talk about these things with those who are not ready for them. I beg your pardon, anyhow. Won't you forgive me?"

"There is no need of forgiveness, Mr. Thorne," answered Ruth, steadily, looking down and manifestly trying to control her voice. "We don't think alike on some subjects, and that is all. And it cannot matter greatly one way or the other, since there is not likely to be any occasion for our being in harmony."

"I think it is always best to be in harmony," he said, in a troubled tone. "I want to be in harmony with you because I like you. I promise you I won't talk about objectionable things to you again."

"I don't think there will be any opportunity for that," she answered, with a faint smile.

"Perhaps; but I'd like you to forgive me for my unintentional rudeness."

"No," she said, tossing her head with an air of positiveness, and looking up at him with a frank and friendly smile, "I won't forgive you. It would be absurd to do that when there is no occasion for it. I guess I was foolish. What do you say if we agree to forget anything disagreeable the other has said?"

"I don't want to do that," protested Harry, "because I mean to think over what you have said, and to try to get your point of view. Maybe marriage without love is wrong."

"Oh, it is, it is!" cried Ruth, fervently. "If anything in the world is true, that is."

"Of course," said Harry, thoughtfully, "you don't fully understand what I mean, and I am afraid you wouldn't think it right to talk about it; so you can't get my point of view."

"But I haven't explained my point of

view," she said, with a smile that was most agreeably friendly; "so that you can't think it over properly."

"Yes, I know your point of view; Dad and I have talked it over a good many times. I never saw so much in it before, though, and I mean to think it over. Perhaps if Elizabeth had held your view I might have given it more consideration before."

"Oh, dear!" cried Ruth, in sudden alarm, "I hope I haven't been meddling."

"Meddling? Why, no. What do you mean?"

"Miss—Miss—your father, I mean, may not like you to be thinking about these things."

"Oh, bless your heart!" laughed Harry, gayly. "Dad is the first one I'll talk it over with. Why, he's the last one to want me to believe anything that can't stand the light of truth on it. No, indeed! Though I suppose, after all, Elizabeth is the best one to talk to about it. She could understand your attitude better, perhaps; though I don't know."

"You don't mean you'll tell her about what we've been saying?"

"Surely."

"Not—not everything I said?"

"Everything I can remember. Of course, if you don't want me to, why I won't. But what difference does it make?"

"I don't think Miss Mowbray will be greatly interested in what a little country school teacher says," was the rather stiff response.

"Oh, you don't know her; she will be very much interested. I'll guarantee she'll be for making me bring her out here to see you."

"Thank you, Mr. Thorne;" and the shapely head went up with a toss, "but I am not on exhibition. It will be quite useless for Miss Mowbray to wish to see me."

Harry looked with a frown of perplexity into the bright eyes of his companion; both broke suddenly into a good-humored laugh.

"You certainly are the funniest little thing I ever saw," he said.

"I haven't the reputation of being so very entertaining," she answered coldly.

"Well," he laughed, "I am not going to be frightened any more. And you are

entertaining, whether you have the reputation or not. Here, within half an hour, you have had me running the gamut of emotions; and up and down the scale, too. No, Miss Warner, you are a very imperious young lady, but I don't know always why the imperious fit is on. No, I won't be frightened by you again."

"Mr. Thorne!" The blue eyes lost the haughty expression and filled with merriment. Harry considered them, on the whole, the most expressive eyes that he had ever seen; and he found it very singular that so pale a face could be so singularly attractive.

"And I shall surely bring Elizabeth out here to see—well, to be seen by you, then. She's on exhibition, I can tell you. I've got a picture of her— Well, I'll bring her out to make your acquaintance."

"That will be very foolish, I think. There can be nothing in common between us. In fact"—very positively—"I don't want to meet her."

"You'd like each other; and she'd do you a lot of good. Now, don't get mad again. I only mean that—"

"That she'll try to reform me. I don't want to be reformed."

"Do you mean to say you wouldn't like to go back and forth every day with a springy step, bright eyes—well, your eyes are all right, of course; but with rosy cheeks, your head up, your lungs full of good air?"

"I mean to say, Mr. Thorne," she retorted, petulantly, "that when I want advice of a doctor I'll go to one and pay him a fee."

"Fifty cents, if you please, my dear young lady. I work for very low prices only because I am not yet established."

"Well, I don't like your 'pathy,' and I won't pay your fee—so now! And I will not have you bringing your Miss Mowbray to meet me. Do you understand?"

"Yes, I think I have a strong grasp on that idea. I am not to bring Miss Mowbray to meet you."

"That is it. And you mean to obey me?"

"I mean to obey you. Does your servant find favor once more?"

They laughed with an air of good fellowship, and shook hands heartily,

having reached the entrance to the lane leading to the house.

CHAPTER V.

Not being greatly given to introspection, Harry was not distinctly aware of the fact, but during his walk to Elizabeth's house his mind was very full of Ruth Warner.

The varied and varying expressions of her beautiful blue eyes remained in his memory, as did also the tones of a singularly rich voice. He wondered how it was that so poor a physique should be endowed with so round and mellow a voice.

He sighed when he thought of her weakness, laughed when he thought of her petulant changes of mood, wondered over the pleasant pressure of her hand at parting and planned to be near the school at the end of the morrow's session.

He was very uneasy about the tramps, and walked back, looking for them, not sure that he ought not to insure Ruth's safety by hunting them out and delivering them over to justice.

There was no sign of them anywhere, however, and he dismissed his fears by considering the improbability of the men remaining in the neighborhood after what had happened, or of their repeating that particular offense if they did remain there.

He reached the Mowbray house much more quickly than he had supposed he would, having his mind rather fuller than usual of big, blue eyes, combined with a puzzled wonder as to how much there might be in that matter of loving the girl one married.

He recalled how William Christy, the hard-headed lawyer, had been moved at the thought of marriage without love. It certainly was odd if the attorney and the little school teacher had the same point of view as to that.

"I believe," Harry said to himself, "that I will just tell Elizabeth all about little Ruth"—Ruth seemed to fit her so well that he had decided to call her so in his own mind—"and what she said about love. I wonder, by gracious! if I couldn't love Elizabeth if it came to that? There wouldn't be any harm in it, I should think. No, there wouldn't be any harm, but somehow I can't think of Elizabeth in that way. No, I won't propose it to her, anyhow. I'll simply tell her about

Ruth and get her opinion. Dear me! I wish little Ruth was my sister; I'd have her a different looking girl in a few months. Gracious! what a lot there was in those big eyes of hers! Prettier eyes than Elizabeth's, I think. Oh, yes, a lot prettier!"

Elizabeth, fairly radiating vitality and absolutely glorious in a beauty that was of the body as well as of the face, stood on the porch waiting for Harry. Her feet were apart, her half-closed hands on her hips—a pose supposed to be characteristic of women who wash for a living. Anyhow, Elizabeth was a joy to look at, to whomever the pose belonged.

"Hello, Harry!" she called out in an energetic, hearty voice.

"Hello, Beth!"

"Get anything new from Rudolf that was worth while?"

"No. I broke the holds without any trouble, all except one. I'll show you that."

All eager readiness, Elizabeth took her place in the middle of the porch, and Harry demonstrated the new hold in a matter-of-course way, explaining how he had broken it. Elizabeth would have liked to practice it a few times, but Harry said:

"Not now, Beth; I want to talk with you about something that interests me. Where shall we go?"

"Come on up to the gym. I've got something to show you."

"What?"

"I can chin myself twice with one hand."

"Good for you, Beth!"

They went into the house, and Elizabeth led the way upstairs. On the way Harry considered Ruth's case.

"I don't believe," he thought to himself, "that Beth will understand Ruth. If I tell her that Ruth is small and weak she will be out of patience with her at once. I've a great mind to tell her about the question of love and marriage. But we've already settled that. No; if I don't tell her about Ruth there won't be any point to the matter."

"Now, then!" said Beth, when they had reached the gymnasium, "go ahead!"

It seemed to Harry that there was something almost aggressive in Beth's robust health. He had never noticed it before. He wondered if anybody

else ever had. He hesitated and made two false starts.

"Why er—why—O, yes, Mr. Christy, father's lawyer friend, you know!"

"I remember your father speaking of him. Yes?"

"Well, he's been here."

"O, has he!"

Harry had not had the least intention of introducing the lawyer into the discussion of the matter, but he had been growing into the strong conviction that Elizabeth would utterly fail to understand Ruth, and therefore had, at the last moment, decided to leave her entirely out.

"Yes, he has been here on a matter of important business."

Elizabeth had reached up and taken hold of a horizontal bar and was pulling herself up short distances, as if her excess of vitality demanded some such outlet for itself.

"Oh!" she murmured, indifferently, hanging at arm's length and drawing her legs up to a right angle with her body. "What a nuisance a waist is! I'll have to take it off when I chin myself. Wasn't any business I'm interested in, I suppose."

"No; O no! Dad talked about his theories to him."

"Thought they were crazy, of course. Well, it doesn't matter what people think."

"He said one thing that made me wonder a little."

"Is that so? What was it? I'm going to take my waist off while you talk. It isn't something long, is it?"

"No-o, not very long. You must bear in mind that Mr. Christy is a lawyer and not much given to sentiment."

"Yes, I suppose so."

"Well, he was talking to me about marrying you—"

"Excuse me a moment, Harry," Elizabeth interposed, taking her waist off and flinging it over a pair of parallel bars near by; "does it look to you as if my left arm was a little smaller than the right when they're both flexed? Uncle seemed to think it was."

She flexed both with great gravity, and Harry, never stopping to admire the exquisite beauty of the round, white arms, the full neck and snowy throat, made a careful comparison and pronounced the

left arm very slightly the smaller of the two.

"Not much," he said, "but a little."

"Isn't that disgusting? Uncle says that is because society has made it a matter of good breeding to neglect the left hand, so that— Do you know, Harry, I hope our first baby will be a girl. She shall be ambidextrous. What a woman we will make of her! Now, what were you going to say?"

"Why, about our marriage. Mr. Christy insists, and I have heard others say it, too, that people ought to love who marry."

"What tiresome nonsense that is, isn't it? As uncle says, they insist on folks marrying for love, and say love is so necessary, but they make married people stay together even if they hate each other, and say it is wicked to let them separate. If love is so important before marriage, why is it so unimportant after? No, Harry, there is just one reason why folks should marry, and that is to have children. If—"

"Yes, I know, Beth; but, after all, folks will love."

"Depends on what you mean by love. If you mean passion—"

"I don't. If we had a baby we'd love it, wouldn't we?"

"Well, I should think so!" she cried, rapturously.

"Then, you see, there is a love that isn't a bit like passion?"

"But, good gracious, Harry! you don't suppose I could feel toward you as I would toward my baby. That is simply ridiculous. Did Mr. Christy say that was possible?"

"No; I was only trying to understand the matter myself. I suppose I was wondering if you and I couldn't love each other. I don't really see what harm it could do."

"Well, there's the principle of the thing, Harry. I don't think I'd care particularly, but I'm sure your father and uncle would feel that we had fallen from their high ideals. We are mighty good friends as it is, you know, and so far as quarrelling is concerned, if that is what your lawyer is afraid of, why, I don't think we're likely to do that."

"It would be pretty hard to quarrel with such a good fellow as you are, Beth. And we are good friends, aren't we? But sup-

pose it should happen that after we were married, I—you should meet some one you really did love in the way ordinary folks do. Did you ever think of that?"

"Isn't worth while thinking of, is it? I'm going to chin now."

"Go ahead! Say, Beth!" he looked at her in admiration, suddenly conscious of her wonderful beauty; "you certainly are the most beautiful girl in the world. I saw a little school teach—Go on, I'm looking."

Elizabeth paid as little attention to his suddenly broken sentence as to his compliment, and took her place under the bar. A graceful leap enabled her to catch the bar in her right hand.

She hung there for a moment and then began to slowly raise her body until her dimpled chin was fairly above the bar; then slowly down again and as slowly up, this time the strain plainly telling. But the feat was accomplished and Harry congratulated her warmly.

"In two weeks I shall do it as well with the other hand," she said.

"That will be fine. It ought to bring the left arm up to the other. But about love and marriage, Beth?"

"Love and nonsense, Harry! If people marry for love they ought to separate for hate. That's logic. If they marry for children and have them, what in the world will they ever need to separate for? There won't be disappointments then. It will be a contract fulfilled, won't it?"

"I know that's dad's argument and your uncle's, Beth; but I was thinking that maybe you might have some other ideas on the subject. The fact is, I heard somebody say that marriage without love was no better than prostitution."

"He was an idiot, wasn't he?" she said calmly, buttoning her waist.

"No such—well, of course, he had never had the matter presented in a rational way."

"I should think not," she went on, in her clear, even tones. "Prostitution is giving one's self for a price; and, of course, it doesn't make any difference whether the price is a sum of money or a house and lot. But when a man and a woman, imbued with a high sense of their responsibilities as possible parents—"

"O, Beth, I know all that."

"You are not vexed about something, Harry?"

"O, I suppose I'm a little irritable, but not at you, Beth. Never mind!"

"Do you know, Harry," said Beth, gravely, "I have an idea that you don't eat enough acid fruit. You see, after the long winter—"

"O, Beth, I don't want to talk hygiene this evening. There! Forgive my petulance! I fancy I'm hungry. Yes, that's it; so I'll hurry off home."

"Why not stay here?"

"Not to-night, thank you, Beth," he answered hurriedly. "I'm sure dad'll be wanting to talk with me about this business matter. You see he's greatly annoyed by the trust."

"Uncle was saying to-day that he believed it would be wiser to give in. He says the trust is utterly unscrupulous, and will resort to any means to destroy your father."

"We'll not give in," said Harry.

CHAPTER VI.

Harry left Elizabeth in a state of as much irritation as his well-balanced nature permitted, though he was not aware of the fact. He thought he was simply indignant that anybody should suggest such a thing as submission to a gross injustice. The way he expressed it to himself was this:

"I wish people would not try to concern themselves with our business affairs. And I wish Beth wouldn't be forever talking hygiene; some things are out of its realm."

Then, inconsistently enough, he began to think of Ruth, and to wish she would live more rationally. Though, to be sure, he did also think of the bigness and the blueness of her eyes, as well as of other things in relation to her, and which were not hygienic.

Until presently he was roused out of something like a dreamy state by the certain consciousness that there were soft footfalls behind him. They were not very near, and they might have no relation to him, but stealth invites suspicion, and Harry began to strain his ears.

He was on a road that ran about a quarter of a mile from the central and practically only street of the village. At that hour of the day, when almost everybody

was indoors, either eating or resting, it was as lonely as if it had been ten miles from human habitation.

The days were still short, so that darkness had completely fallen on the earth; and the gloom on the road was the deeper in that it was bowered by great trees.

Footpads were an unknown quantity there. Harry had no enemies that he was aware of, and his feeling on being certain that he was followed was one of curiosity rather than anything else.

There is something essentially disquieting in finding one's self followed in the darkness by an unknown, stealthy person, and as Harry listened intently so that he might as well as possible gauge the distance between him and the person behind him, he racked his brain for a solution of the singular situation.

Suddenly the thought of the trust flashed into his brain, and he seemed to find a solution. It was true that the trust was dominated by a most religious man, but it was also true that personal violence had been committed on some of those obstinate opposers of the trust's methods, when the result, at least, proved that personal violence was exactly the thing to dispose the obstinate individual either to compliance or to retirement.

The instant this thought took root in Harry's brain he began to plan for such an issue of the adventure as would not only frustrate the intention of the man behind him, but result in his capture.

The man might, indeed, shoot him, but Harry doubted it; for in that case the assailant would make a noise which might attract someone to the rescue, and there was the chance of missing in the darkness.

Harry had gone over the road so many hundreds of times in daylight and in the blackest night that he had no difficulty in knowing exactly where he was, as well as the character of the road immediately ahead of him.

Of course, it needed very strong nerves to go on as if unconscious of the light footfalls behind him; but Harry's nerves were in the best of order, and he had the additional advantage of the certainty that any possible antagonist must be his inferior in strength and agility.

So he walked along as steadily as if he had heard nothing, his blood only

quicken by the prospect of a tussle which should be in earnest instead of in play.

Ahead of him lay a particularly favorable stretch of road for an assault, if an assault were intended, and as Harry entered on it he redoubled his caution.

It was plain in a few moments that he had reasoned the matter out correctly, for he had scarcely entered this darkest and most gloomy stretch when the soft footfalls quickened and came nearer.

Harry's breath came and went in short silent gasps; he crouched a little, his head was held on one side. The steps came nearer and nearer; then of a sudden became overt, with a ferocious abandon of concealment.

Harry leaped, panther-like, to one side; a bludgeon whistled through the space where he had been. Harry leaped back, and the man, cursing horribly, was borne to the earth. He struggled with the ferocity of a wild beast caught in an unexpected snare which it believes it can break.

"Be still," said Harry, "or I'll hurt you."

The man cursed, and struggled on. He naturally could not fully understand a strength like Harry's. But suddenly he yelled with pain and yielded utterly.

"Damn you! You've broken my arm!" he groaned.

"No, dislocated it," Harry said. "Get up now and walk ahead of me."

"How can—"

"Do as I tell you, or I'll twist the other arm."

"What kind of a kid are you, anyway?" the fellow moaned, for his arm pained horribly.

"Get up! Don't try to get away from me, but do what I tell you."

"Oh! My arm!" the fellow cried, as he rose to his feet. "Where are you going to take me?"

"That is my affair, not yours. And don't talk. If you are wise you'll do all the thinking you are able to while you have the time. Pretty soon you will have to talk."

"Where—"

"Another word, and out goes your other arm!"

Plainly the perfect unconcern of Harry as to the other's resistance, and his curt, authoritative tone completed the fellow's

subjugation. He swore very softly under his breath, but did not speak again, nor make any attempt at flight, though Harry kept no hold on him.

When they reached the Thorne house Harry let himself in with a pass key, ushered his prisoner in, and looked at him by the light of the hall lamp. He had captured one of the tramps.

"My God! won't you fix my arm, boss? It hurts like——"

"Stop! Don't speak until I give the word."

"Is that you, Harry? I'm in the dining-room. Have you somebody with you?"

"Yes, a guest. I'll bring him in there. Go in!"

He had placed his hat on the rack, and pointed toward the door of the dining-room, which opened into the hall at the other end. The fellow went doggedly, and in evident pain.

Mr. Thorne started up in surprise at the sight of the unkempt fellow, whose distorted features betrayed the pain he was in. Harry closed the door and motioned the fellow to a place where he could be seen better by his father.

"What does it mean, Harry?"

"I don't know, dad, but I'm going to find out. Excuse me a moment while I put his arm back."

He took up the limp arm, the wretch shrinking from the anticipated pain, and groaning in advance. Harry did not take long in the replacement; there was a sort of report as the ball of the bone dropped into the socket. Harry gave the fellow a chair.

"Remember you're not to speak until I give you permission. Now, dad, I'll explain. It is a case of assault with intent to kill. This is the would-be assassin, and out in the hall is the would-be instrument of murder."

The wretch in the chair studied the rugged, stern face of the father, and the handsome but determined face of the son, and a singular sort of hopelessness grew upon him. Their lack of excitement, and their grim humor over a matter that

would have set an ordinary household into an irrepressible turmoil, impressed him as something so much out of the common as to be uncanny.

"If," he began, but shrank into silence as Harry turned a warning eye on him.

"Was it robbery?" Mr. Thorne asked.

Harry bent over him and said in a low tone: "I wondered if it might not be one of the gentle methods of the trust."

"Why did you assault him?" Mr. Thorne asked of the man.

"He knows," was the sullen response.

"I had previously knocked him down for molesting a young lady," Harry explained. "But that is not the reason. You'd better tell the truth, if you want any mercy shown you, my man."

"I take my oath——"

"Don't waste time," interrupted Harry. "If you want to tell the truth, do it. But I'll tell you what I think, dad: we'd better lock him up in the wine cellar—not a drop of wine there, my man—while we decide what to do with him. To me it looks very like ten years at hard labor."

"You'll be sorry if you don't listen to me," the man cried huskily. "I've got something to tell you."

"Well, what is it?"

"What time is it?"

"Seven o'clock," said Harry, looking at his watch.

"Will you let me go if I tell you something to save you a pile of money? A whole fortune, maybe?"

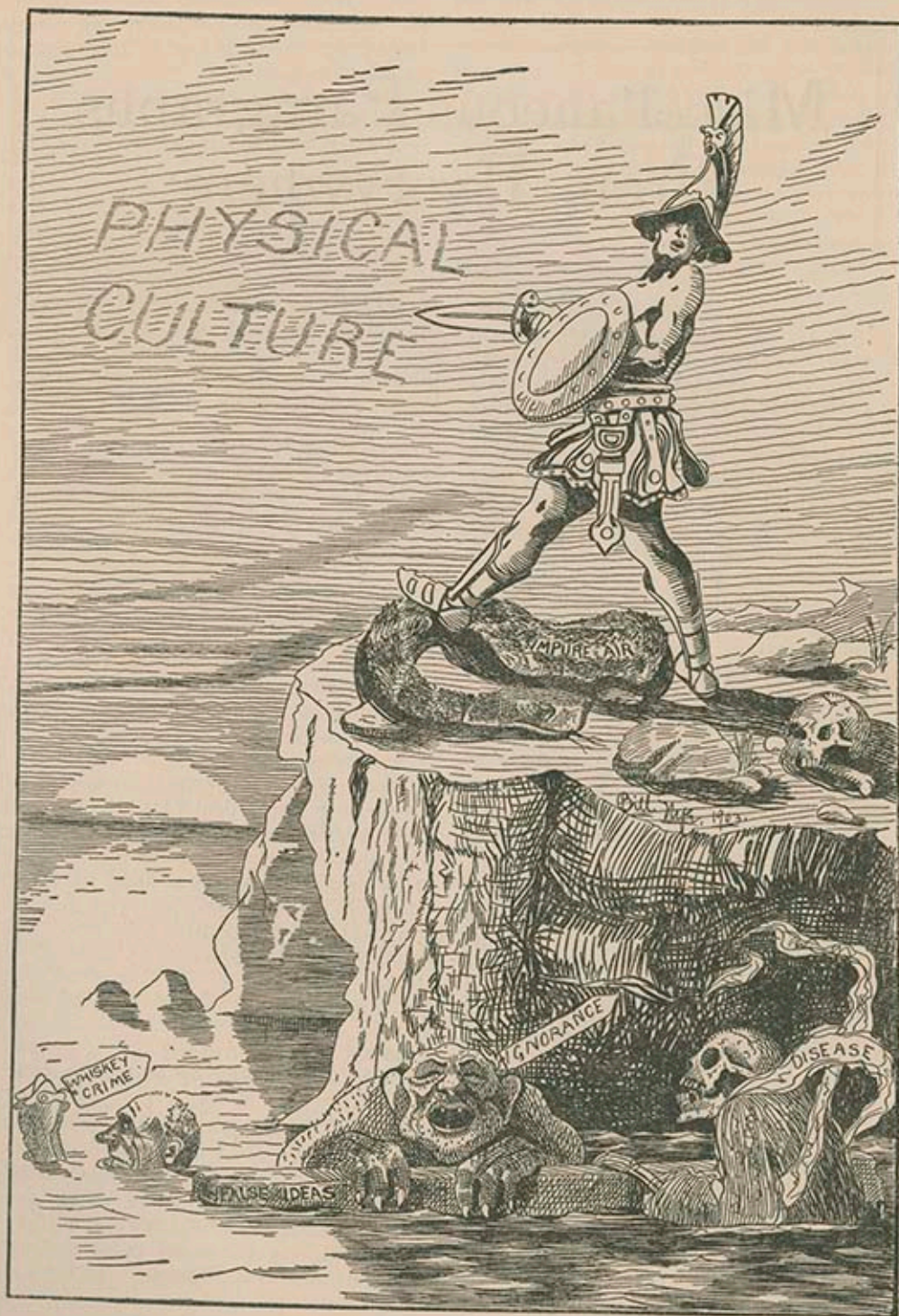
Harry and his father looked at each other, the same thought animating them at once. Mr. Thorne answered quickly:

"Will you tell us who set you on to assault my son?"

"Nobody did. I take my oath nobody did. I wanted to get square with him for this afternoon. But you'd better speak quick, boss. What I've got to tell you won't wait. Will you let me go if I tell you something big? Say yes, and I'll tell you first, and you can let me go when you prove it. But speak quick, or it won't do you or me any good."

"I will," said Mr. Thorne. "What is it?"

(To be continued.)



DAWN OF A NEW ERA
Physical Culture's Great Fight to be Ultimately Crowned with Victory

Miscellaneous Paragraphs From Everywhere

Buttermilk for Infants

In a recent French paper an eminent French writer on "Children's Diseases" writes of the valuable use of buttermilk in indigestion and in all wasting diseases of children. We cannot help giving our indorsement to this recommendation of the often slighted buttermilk, not only as a food, but as a homely remedy to be used in place of drugs. Fresh buttermilk can be given to infants if food does not agree with them. The addition of a little warm water and a thorough stirring together with a small amount of sugar, will make it palatable and easily digested where every other form of milk will curdle in the child's stomach.

Buttermilk should be better appreciated among mothers and by all others as an inexpensive and healthful drink.

Rice as a Valuable Food

Rev. H. S. Clubb recently wrote a letter to the Agricultural Department at Washington, asking how it was that the Japanese were such strong, noted wrestlers, while their chief and almost only food was rice, a grain generally believed to be deficient in muscle-producing and sustaining qualities. Professor Knapp, of the department, replied as follows:

"I have not the analysis of Japan rice before me, but my recollection is that it is richer in fats than other rices, but not in protein compounds or flesh-formers. Being richer in fats, it has more flavor than other rices. The reason the Japanese are so muscular is that they do not polish their rice. In American mills the outside coating of the rice kernel is rubbed off; first, the outer husk is removed; second, the bran, just within the husk, is removed; and third, the solid

kernel is then rubbed to remove the rough protein surface and give the kernel a gloss. This is called polishing, and the material removed is called polish, one of the most nutritious substances in all cereals.

"Polishing removes more than three-fourths of the flavor and about one-fourth of the fiber material. In Japan, China, and India, polishing is not done except for foreign markets. The Japanese army out-footed the armies of Russia, Germany, England, France and America in the advance on Peking. The Japanese soldier is fed on rice, a ration of beans and fish. He can double-quick for fourteen hours, and repeat it for days. The Japanese or Chinese may be shot through the body, if no vital part is cut, and scarcely notice the wound."

This seems to mean that our rice dealers go to a great deal of trouble to remove the most nutritious part of what we should have for our body. It appears to be as absurd as the milling of white flour. We hope intelligent rice dealers will read of the expensive folly and market their rice hereafter in an unpolished state.

Perfect Nourishment of System Takes Place During Sleep Hours

In an article on sleep in one of the prominent newspapers some very excellent points are given which substantiate the article in the January number of PHYSICAL CULTURE, namely, that vigor and rebuilding of the body take place more so during the hours of sleep than at any other time. It seems that sleep is the off-duty period of consciousness, and at this time, when all the bodily functions are in a quiescent state, the processes of

assimilation take place best. Early sleep is recommended, since assimilation is said to be much greater before midnight than at any time after, because of the better circulation of the blood.

Oxygen is also consumed in larger quantities in the early part of the night. The heart, according to scientists, decreases in work from about midnight until four or five o'clock of the following day. Dreams, the relapses of sick people, and even death occur more frequently after the midnight hour. Proof of the great value of sleep for bodily recuperation is found in the horrible six-day races, wherefrom the men come out in the end frightfully emaciated in body and with their vitality wrecked. A person can go forty days without solid food and yet remain in health. He can live seven days, sometimes longer, when water is excluded with the food, but he can hardly go through seven days of sleeplessness without becoming mentally and physically deranged or finding his death.

New York's Successful Outdoor Treatment

Out of one hundred and twenty-seven cases of consumption that have been treated recently in New York with natural methods of cure, eighty-four have left the hospital robust and healthy. The open air treatment for tuberculosis was started by the progressive Health Department of New York City on North Brother Island, and has proved a thorough success. Pure air, sunshine, good food, and absence of worry which has been advocated so long by us as the only remedies for consumption, were adopted by these doctors, and the results speak grandly for themselves.

Better be a "Rubber" than a "Pluggger"

DOCTORS CALLING EACH OTHER NAMES

When doctors throw lime eggs at one another, who shall interfere? Nothing is more encouraging than the difference of opinion developing among doctors every day. It seems to be becoming a silent acknowledgment of the words of Sir Astley Cooper, physician to Queen Victoria, who, in summing up his experience, said: "*The science of medicine is*

founded upon conjecture, and improved by murder."

Now certain facetious M. D.'s even among the Osteopaths, have taken to decrying in the medical journals massage as "a worthless, played-out system of curing diseases, fit only for the masseur."

A deeply grieved Osteopath answers back to these complaining that "they vulgarly allude to us as 'rubbers.'" Then he begins to call names. "Better employ kneading, stretching, pounding, than to be plugging and stuffing him with foul poisons that, in nine hundred and ninety-nine cases out of a thousand, serve but to accentuate his diseased condition. Better by far stimulate his blood, muscles and nerves by wholesome, passive exercise, than to vex and burden his system by horrible mixtures of arsenic, strychnine, quinine, opium, and the like, as do the constituted doctors who are blinded by petty professional prejudices or afflicted with mental hyperaesthesia." And so the merry war is going on to the benefit of sick patients, the extermination of doctors, to the advantage of the human race in general.

The Nourishing Meat Diet

David Mitchell, one of America's grand old vegetarians, having reached a mellow age of human happiness, has dropped off naturally at the age of one hundred and two years and seven months from this earthly growth, and into a land, no doubt, where the traffic in embalmed animal carcasses never offends his sight. Now, if David had slaughtered one of the well-fattened hogs on his neighbor's farm now and then, and lived on a nourishing meat diet, or yet subscribed his name to a Duffy Malt Whiskey Old Age testimonial, isn't it possible that he might have lived many years more?

What's the Use of It All?

Now and then healthy people forget the physical wealth they possess, and envy the rich just a trifle. The desirability of possessing material wealth seems a bit natural, perhaps, and yet the rich have a poverty of their own that they would gladly exchange for the poverty of the poor man, putting a lump of gold in the balance. This is finely illustrated

in the words of Cornelius Vanderbilt, shortly before his death:

"I don't see what good it does me—all this money that you say is mine. I can't eat it, I can't spend it—in fact, I never saw it, and never had it in my hands for a moment. I dress no better than my private secretary, and cannot eat as much as my coachman. I live in a big servants' boarding house, am bothered to death by beggars, have dyspepsia, cannot drink champagne, and most of my money is in the hands of others, who use it mainly for their own benefit."

Schoolboy Athletes

For the first time in the history of New York's public schools an association has been formed to foster manly sport among elementary grade pupils of the schools. This new organization, which is the outgrowth of Dr. Gulick's broad-minded recognition of Physical Culture, was formed with the design of taking the thousands of young students of Greater New York away from the evil companionships of the streets through encouraging athletic games on Saturdays and holidays. It is pointed out, also, that it will keep the youngsters in doors at night throughout the week, since they will be interested in practicing and perfecting themselves for their games, instead of going out and seeking bad company.

Dr. Gulick, who is the director of physical training in New York schools, recognizes that the man of the future is the city man, but that he can live only in the stress and storm of such a life by possessing the highest degree of physical health. It is the hope of Dr. Gulick to have Physical Culture go side by side with the mental development of the young. His ambition together with the members of the new association, is to create a national body wherein at each annual contest in the largest cities the champions could be chosen as representatives to meet the young athletes of other cities. W. R. Hearst, of the *New York Journal*, has given great stimulus to the work by offering several beautiful trophy cups to be competed for in the various games. The movement is laudatory in the higher sense, and is encouraging to all who have the manhood

of their country at heart. It shows the trend of the times.

Operated for Appendicitis Three Different Times

STRICKEN BLIND NOW.

It is a sad and pathetic story that is becoming prominent in the daily papers of New York. Miss Wilson, a bright young girl, and the daughter of Rev. James D. Wilson, of Brooklyn, has suddenly become totally blind. This young woman was stricken some time ago with what the "medicine man" at once labelled "Appendicitis." Miss Wilson was a student of the Baltimore Woman's College at the time, but was removed to a private sanitarium, when her illness came on. She was operated upon at three different times, presumably for the "grape seed" that was never there. Immediately after the last unscrupulous hashing the young woman began to lose her eyesight and became very weak. The last report, issued from her home in Brooklyn, is that the young woman has now become totally blind.

"Should voices from the dead come to us, the cry would be more light, more knowledge for our profession."—Dr. J. T. Hodgen.

Short Rations to Gain Weight

St. Louis has a pretty young woman, Miss Mabel Dare, who has made a courageous innovation in her daily life by spending only fifty cents a week for food. Her room rent costs her \$1.50 a week, her carfare to and from her business 60 cents, making her actual expenses amount to less than \$3.00 a week. Miss Dare is in splendid health, and credits her condition to the fact of eating but little. Her aim in going on "short rations," as she calls it, is the purpose of increasing her weight. In speaking of the practice she has made she says:

"I am slender, and am increasing my weight by eating less. Some people think they ought to eat more, but I don't; and my theory is proving to be correct. During the last five weeks I have gained three pounds. I must say that I never felt better in all my life. I work hard at my desk from nine in the morning un-

til five in the evening, and then go home and cook my meals and tidy up my own room. I have bought a punching bag and boxing gloves, and use them before retiring. I take a walk for more than one-half mile each morning before boarding the street car for work. I never drink coffee, eat no meats, but I do eat plenty of fruit, which can be bought cheaply at the market, and, with various kinds of breakfast foods, corn and vegetables, I eat heartily at each meal. I care absolutely nothing for boarding-house or restaurant cooked food. I think that girls gorge too much, which not only affects their brains, but wears down their characters, and produces great *moral defects*."

Miss Dare is right. We struggle against sensuousness in our thoughts and against depraved desires, and do not know that by simplicity in our eating, by avoiding stimulating meats and spices we avoid the abnormal appetite and gorging, and consequently the animalism that shames us.

Boy Lived on Water for Eight Days

The recent incident of a child who was lost for eight days in a swamp on Warsaw Island is interesting in its relation to fasting. The little fellow had wandered from his parents into the woods and had lost his way. He was found eight days afterward perfectly nude, and his body, from the crown of his head to the soles of his feet, was covered with blotches from the stings of mosquitoes and with hundreds of cattle ticks clinging to his flesh. He was without food eight days and nights, living on the fresh water that he secured for himself from puddles in the swamp.

The little fellow, in relating his adventure, said: "I walked around a heap, but I could not find any roads, and I kept in the shade under a big tree. There was rain water in the pond and I drank it from my hands. I was awfully hungry, but I did not have anything to eat, and so drank a heap of water. It was Tuesday when it got so hot, and I took my clothes off and went into the pond. I could not do anything, as my stomach hurt me so bad. I just kept under the big tree and kept drinking heaps of water."

Benn Pitman and Physical Culture

A lecture was recently given by the veteran shorthand man of America, Benn Pitman, to his Cincinnati school. The subject was Physical Culture, and the care of the body. Benn Pitman is now more than eighty-two years of age. He says he has been a vegetarian for more than thirty years of his life, and emphatically stated before his pupils that meat is not necessary in order to attain and keep good health. He outlined a list of simple exercises for the students which he himself practices, and urged his pupils to go through them morning and night if they desire to get the best there is in mental and physical health.

Do Some Dry Doctors Try to Spring a Joke Now and Then?

In a past number of the *Atlantic Magazine*, C. E. A. Winslow writes on the wonderful strides of medical science. Whether this doctor attempted a quiet joke on Opper's "The Common People" for the edification of his fellow practitioners can only be guessed at by a few extracts from the article:

"Since the time of Jenner it has year by year become more certain that we have in vaccination a sure and perfect means of fighting smallpox. Disease is a struggle between chemical poisons, called toxins, and the anti-toxins developed in the body. By introducing into diphtheria patients anti-toxin taken from horses, the death rate from diphtheria has been reduced to one-third of what it used to be. Typhoid fever has been found to be contagious, and the 'contagious element,' or germ, 'enters the body in every case with some article of food contaminated by an earlier victim.' It is a preventable disease. Malaria and yellow fever are communicated by mosquitoes, which must be exterminated to prevent the plagues.

"Each disease must be fought after its own kind. For smallpox, vaccination; for diphtheria, anti-toxin inoculation; for typhoid fever, the protection of food supplies; for yellow fever the destruction of mosquitoes; for tuberculosis, the disinfection of sputum; for cholera infantum, the cooking of milk. Absurdly simple many of these remedies appear; but with a thorough knowledge of the micro-

parasites of any disease, and the mode in which they gain access to the body, their exclusion will always be theoretically a simple matter."

Cold Water Training

Coach Robinson, of Exeter, N. H., reports fewer injuries among his football players this year than he has ever had before, and attributes this good luck to the training system of cold water that he has employed this year for the first time.

It consists of allowing the players to use cold water only after practice, which he claims hardens them and also takes away all stiffness, better than all the liniments ever invented. At first the students balked at the icy bath, but before long they became fond of it, and, as a result, colds and similar petty ailments with which the team had been bothered in the past have disappeared, and have become unknown at this progressive New Hampshire school.

The Deadly Corset Curse

Every little while a report is placed in the newspaper, and paid for by a corset manufacturer, telling of a woman's life saved by her corset. Sometimes it is a bullet which strikes one of the steel ribs and glances off, or the deadly blade which an infuriated lover aimed at her heart. When these statements are circulated by the manufacturer's press agent, every fashionable lady takes new courage, and draws the strings of her corset a little tighter. A solid steel argument, however, has recently come to pass which is somewhat contrary to the ordinary corset news, and is well worth preservation.

Mrs. Wm. Halliday, a Buffalo woman, suddenly died a short time ago. A post-mortem examination was performed, and the astonishing discovery was made that two pieces of corset steel had penetrated through her flesh and into her heart. It is said that this happened while she was very tightly laced, and that in bending her body or striking against something, the steel ribs broke and penetrated into her side. This unfortunate case is a frightful warning to women, and should be a stronger argument for women to stop wearing corsets than has been given heretofore.

An intelligent French physician, Dr. Marechal, has begun to advocate the passing of a law that will make the wearing of a corset by any woman under thirty years of age an offense punishable by a fine of from \$20.00 to \$2,000, to be imposed on the ignorant parents or guardians who permit the sinful practice.

The Struggle from Tobacco Slavery

In an interesting letter to *Medical Talk*, H. L. Wessels, of 807 West Sixth street, Cincinnati, Ohio, writes an honest description of the manly efforts he made to free himself from the repugnant tobacco habit. This letter shows a determination of will power and genuine courage, and the triumph will make him a finer and truer man to himself. The letter follows:

"I used tobacco for about twenty years, having formed the habit while going to school. I quit the habit, on a sudden resolve, about three months ago, and have not used it since.

"The desire was stronger the second and third week of abstinence than at any time before or since, and has left me entirely now. An occasional bit of gentian root to be chewed rendered valuable assistance, but it will prove ineffective unless backed up by a firm resolve, almost to stubbornness.

"The continued craving for tobacco, or some satisfying substitute, led me to sample every kind of lumber that I found loose. Chewed gum until my jaws ached, chewed bread until I overate, and was on the verge of relapse in the third week, when I quit looking for substitutes, and *conquered*. This craving for the weed, or the abstinence therefrom, also acted on my physical powers for a month or more, causing a tired feeling not to be ascribed to the heat of summer. This has changed until I now have regained my former strength, and have increased about twelve pounds in weight, something I had almost despaired of."

Vaccination Robs Us of Innocent Little Children

Simpson.—At Toronto, on May 28, 1903, of lockjaw, resulting from vaccination. Age 6 years 8 months 21 days.—*Citizen*, Ottawa, Canada.

The fatal symptoms developed on Monday morning. The poor little child complained that his jaw and back were sore. Thursday evening the first spasm appeared. The muscles of the face became horribly contracted, the head was drawn backward, and intense agony followed. Death relieved the sickening misery of this vaccinated child on Thursday evening.

Washington, Ind., Sept.—E. Dougherty, young son of Eugene Dougherty, died Sunday from tetanus, or lockjaw, the result of vaccination.

The convulsive movements began very gradually in the child. When the spasms were developed they occurred as often as thirty or more an hour. The little sufferer died in the greatest agony, and in fifteen hours after the death of her darling boy the mother was also dead. She died heart-broken. The sight of the child's intense suffering so affected her mind that shortly before she died she had the same horrible spasms.

Chicago, Sept. 25.—As a result of lockjaw, which developed from vaccination, William J. Lee, five years old, died Wednesday evening. The boy was vaccinated shortly before the opening of school, three weeks ago, and while on his way to attend school for the first time he caught cold in the arm and was ill for several days, and Wednesday lockjaw developed.

These deaths will stand as silent records, a shame forever to doctors and to doctordom! They will stand like so many little mute forms pointing the finger of accusation at the tribunal of Medical Empiricism which sentenced them to their early deaths! And the fathers of these children, scattered all over our fair land, far into Canada, will repeat in their hearts the well-known dark gathering words:

"How long, Oh my God, must I endure this and be still?"

Sweet Land of Liberty

It seems almost irony to take note of any more news referring to the further progress of vaccination after the above tale of vaccination.

A Canada paper contains the following statement:

CHILDREN MUST BE VACCINATED.

NONE WITHOUT CERTIFICATES WILL BE ALLOWED TO ATTEND SCHOOL.

Dr. Laberge, the medical health officer at Montreal, quotes the following by-law, which he says will uphold him in his demand for vaccination:

"No parent or guardian, no commissioner, trustee or other person shall allow any pupil under his guardianship or control to frequent any school, college, convent, asylum, university or other educational institution in this city, unless such shall be provided with a certificate of effective vaccination.

"Every person offending against any of the provisions of this by-law shall be liable to a fine, and in default of immediate payment of said fine to an imprisonment."

"I am determined," said Dr. Laberge, "to enforce the above enactment when the schools open."

Well may freemen be silent of their boast when laws are made that place a self-opinionated medical ass such as this on a pedestal of authority wherefrom he can issue the above imperial edict to American men, backed by an unconstitutional, arbitrary law.

Anti-Vaccination Fight in Grant County, Ind.

Indiana has some vigorous people in its State who can defend themselves when necessary against doctored laws. It is reported that the people in Grant County are in open rebellion against the law requiring a public school child to be vaccinated. The schools were closed on account of the refusal of parents to allow their children to be vaccinated, but were reopened by the people and the law was absolutely ignored. Intelligent taxpayers, when the children were sent home on account of non-vaccination, took up the fight and brought it to that issue where the trustees held a meeting and determined to open all the schools. No pupil will be required to present a certificate of vaccination. The Board of Health has sullenly retired to a seat in the rear.

Crime, Insanity, Suicide

Evidently a great many readers have tried to argue with the habitual user of stimulants and narcotics, such as the liquor drinker, smoker, drug slave and the tea and coffee weakling. In answer to you these people generally give a quiet curl of the lip and smiling answer, "Why, I have used it all my life, and I am living yet!" This same thing was said a century ago by smart men and women who later became mothers and fathers. They are dead now! Stimulants never harmed *them!* But across the page of the present day there is written another answer, and it is in the quiet prisons and insane asylums, where mental weaklings, the product of another age, must froth at the

mouth for the sin of a father and mother.

Dr. Arthur MacDonald, expert criminologist of the Bureau of Education, in an annual report before Congress, tells the tale of these influences. "With few exceptions within the last thirty or forty years there has been an increase relative to population in crime, suicide, insanity and other forms of abnormality. The saddest outcome of this statistical review is that the youth, compared with adults, have committed more crimes as society has developed, and that suicide among children has gradually increased."

Where lies the fault? We can only look back to the sneering ignorance of a past age, a great deal of which ignorance is remaining with us yet.

WHO WILL BUILD A PHYSICAL CULTURE HOME FOR WORKING GIRLS?

To the Editor:

I am very much interested in your physical culture work, and would like to see it introduced in the public schools.

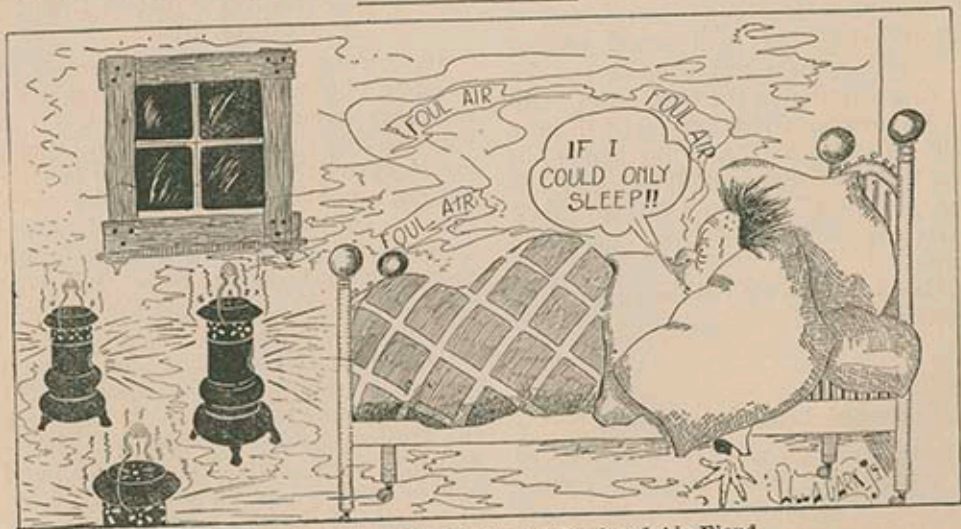
Could there not be founded in the city of New York a physical culture home for working girls? Would it not be possible to have such an institution and make it reasonable enough to come within the means of average working girls, a home where they could get clean, airy rooms, a suitable diet, and a gymnasium, with

a teacher? Many of these girls spend nine to ten hours a day in a stuffy, ill-ventilated store or shop, then come home and spend the evening and night in a place that is even worse. They are the mothers of the coming generation, and it is with them that we should begin, if we want strong, healthy children.

To improve the physical condition of the poor working girl would be a noble work.

MARIE E. HARTILL.

Brooklyn, E. D.



The Feather Bed, High Pillow and Enclosed Air Fiend

A MILD-MANNERED BOY

A WEST POINT STORY OF A MODEST YOUTH WHO DEVELOPED REMARKABLE QUALITIES IN EXCITING MOMENTS

By Roland Russell

The following story is based upon facts, as anyone will admit who has read the evidence adduced before the Congressional Committee appointed to investigate the matter of hazing at West Point a very few years ago.—BERNARR MACFADDEN.

HE was certainly as gentle a boy as ever entered the U. S. Military Academy at West Point. Most anybody would have called him a pretty boy, I think; for he had a pink and white complexion, over which a blush seemed forever hovering, the color came and went so readily on his cheeks; his eyes were a limpid blue, and as mild and kindly as a girl's; his lips were so red and so cleanly cut that it surprised no one, when they opened, to hear a mellow, well-modulated voice; his chin had a positively sweet dimple in it.

As for his manners—well, he was polite. A polite boy! With a number of others of us who had received our coveted appointments to West Point, he was preparing for his entrance examination at a school in Highland Falls. We called him "dearie" at once. He was quite too sweet for any less tender name.

He smiled gently the first time he was called so, and looked oddly out of his clear blue eyes at the fellow who had done it; a tall, fine-looking Virginian. Then he accepted his name without any protest; and we had very little use for him afterward. It seemed to us that he was not the material of which soldiers should be made.

And yet nothing was more certain than that he would pass, for not only was he the cleverest of us all, but he was uniformly serene, taking everything in the same smiling way he had accepted his name of "dearie."

I couldn't help liking him in spite of his being so girlish, so I overtook him one day when he was going for one of his solitary walks. I had made up my mind to do him a good turn if I could.

"Hello, dearie!" said I, "I'll go with you."

Of course it was a very off-hand way

of inviting myself, but it was only dearie, and it was for his good anyhow, so I was not as particular as I would have been with some other fellow; our aristocratic Virginian, for example.

"Oh, thank you," he said, in his polite way. "You are sure to enjoy it. I think this must be the most beautiful bit of country in the world."

"Yes, I suppose it is," I answered, rather gruffly; "but the fact is, dearie, I want to give you a bit of advice."

"Oh, thank you!"

"You've got to be a little more chesty"—slangy, if you please, but expressive—"if you expect to get along with the fellows."

"Chesty!" he repeated, his eyes twinkling. "Why my chest measure must be as big as any of you fellows can show."

I hadn't noticed it before, but as I took a careful look at him I saw that his chest was both broad and deep; that, in fact, he was bigger altogether than he seemed, and this, I suppose, on account of his being so well-proportioned.

"I don't mean that," I answered, testily. "I mean that you've got to stand up for yourself or you'll have a mighty hard time at the Point. I had a cousin here and he told me before I came that they'd surely run a chap out if he showed lack of sand. I'm telling you this for your own good, dearie."

"Thank you; it's very kind of you. What do you think I ought to do? I don't see exactly how I can show my sand, as you say."

"Oh!" I exclaimed, in disgust. "Why, there's that wretched name dearie. I can tell you that if anybody were to call me anything like that, I'd make him sorry for it."

"He smiled, and his eyes twinkled; then he broke into a laugh that was ex-

ceedingly jolly. I looked at him rather scornfully.

"I beg your pardon," he went on, checking himself, but still smiling with his eyes. "I couldn't help it. Don't you see it's so much like a polite way of asking me to fight you."

"No," I answered, curtly, comparing my much greater bulk with his compact, middle-sized body; "I must say I don't see."

"Why, you call me dearie, don't you?" he laughed. "All of you do. Of course, I might undertake to fight you all—some of you nearly twice as big as I am, too—but what good would it do me? I don't like fighting in the first place, and in the next some of us won't pass."

I stopped short and looked him over with the utmost scorn.

"I reckon your honor is for sale cheap," I said, and turned and stalked away.

"I think you misunderstand me," I heard him say in a dispassionate tone.

"Quite likely," I retorted. "I understand gentlemen best."

Now that was distinctly mean of me, for I was too big for him to fight; but I was disgusted with him.

Well, after that, even I left him pretty much to himself; and I am free to say that I fancy he was not sorry for it, for the fact was that we felt ourselves very much men and proved it by—well, by dissipation of one sort or another; and it was quite plain to us that dearie never dissipated at all.

One night we were having a bottle of wine at a place that called itself a hotel, but which in truth was only a liquor saloon. It was not our first bottle and we were elated. I could use another word, but "elated" sounds better.

Unluckily, one of the fellows, going to the doorway, spied dearie coming down the street and suggested it would be a good idea to initiate him. We all agreed, waited until he was in front of the place and rushed out on him, dragging him in.

"That quart measure!" said our tall Virginian, whose lordly manners made him our natural leader.

The quart measure was brought and filled with wine, dearie looking on in his unmoved way and saying nothing until

the measure was presented to him. Then he smiled and shook his head, protesting:

"I don't like wine."

"It's good for girls; will make men of them," said the tipsy Virginian. "Hold him and put that funnel in his mouth so I can pour it down."

Dearie's head went up and a singular flash lighted up his blue eyes. It seemed to me, who was watching him closely, that I saw his breast swell.

"Please don't use force," he said, mildly.

"Drink, then!" said the Virginian.

"Really I don't drink," was the answer. "I hope you won't be rude enough to insist."

"I reckon we'll have to be a little rude, fellows," said the Virginian, with a sneer. "Hold him!"

Two of us held him while the Virginian approached in his stately way with the quart measure of wine in one hand, the funnel in the other.

"Drink, pretty creature, drink!" he said.

"I'm afraid I shall have to use force," said dearie, with a look of distress on his face.

With a movement of his shoulders he flung off the fellows who held him, dashed the wine into the face of the Virginian and then caught him up in his arms and plunged out of the place with him before we, in our stupefaction, could offer any effectual resistance.

In fact, we did not recover our senses until we stood by the side of a nearby horse trough, into which dearie had thrust the Virginian. The latter was spluttering and splashing, and dearie, with a deprecating look on his face, was saying:

"Perhaps I was too hasty, but it seemed to me that he needed water more than I needed wine."

The next day the Virginian demanded satisfaction, sending one of us to dearie with a message to that effect. I also waited on dearie, wondering what he would do, but offering my services. The invitation to fight was delivered in my presence. Dearie cast a troubled look at me and sighed:

"I don't like to fight, but I suppose there is no way out of it. Really, you know, I wasn't the aggressor if you look

at it rightly. Can't we settle this in any other way?"

"You can apologize," snapped the other, scornfully.

"But there's nothing to apologize for, unless—would it do if I were to say I was sorry the water was so dirty?"

I roared with laughter. Dearie stood there looking so mild and so concerned. The bearer of the challenge grew fiery red.

"Will you fight or not?" he roared.

"Yes, if he wants me to," answered dearie, deprecatingly; "but I don't like to."

We took our men to a nice, lonely bit of woods not far away, and stripped them to the waist. I never saw a fellow so reluctant to fight as was dearie, and I braced him up as well as I could and gave him no end of good advice.

Then the two faced each other and we had a chance to compare them. I believe I never in my life saw so handsome a body as dearie's. His clothes had very thoroughly disguised him, as clothes generally do a well-developed body.

"Are you ready?" demanded the combined time-keeper and referee.

"I'm ready," said dearie, "but really, gentlemen, it is sheer cruelty to put me against this man. Why, he doesn't know the first thing about sparring. Look at the way he puts his hands up! Now take my advice," he went on, in his mild way, turning to his opponent, "and shake hands and go home. You were in the wrong in that affair, you know, but I don't ask an apology. Will you shake hands?"

The outraged Virginian's answer was a blow that landed very lightly indeed, but it left dearie's face white. I don't rightly know what followed, except that dearie let fly his fists and the Virginian fell prostrate at once.

It was no fight at all, and I have always believed that at the first semi-annual examinations the Virginian failed purposely rather than live for four years with dearie. You might suppose we stopped calling him dearie. No, indeed! Only it was a privilege to do it after that.

This was in the days, not so very long ago, when hazing was in vogue at the Academy. The upper class men pro-

fessed to believe that it was necessary for the licking into shape of the plebes.

Anyhow, whether it was for our good or for their amusement, we poor plebes had a strenuous life of it from the day we went into camp on that lovely plateau that nestles at the foot of the highlands and overlooks the lordly Hudson.

We plebes took the situation variously, and in accordance with our tempers, our judgments and our wisdom and experience. Some were sullen, some raged, some were patient; none liked the tyranny of the upper-class men. I had been prepared by my cousin, and tried to conduct myself so as to attract as little unfavorable attention as possible; and I gave dearie the benefit of my advice.

"Thank you, old man," he said, gratefully. "It is very good of you to post me. I fancy, though, they'll make us all take our medicine."

And really it seemed so, for conduct ourselves as we would there was always some unwritten rule that applied to us, and for infraction of which we were put to the torture, which was sometimes only mild and funny, oftener such as left us terribly exhausted. Some of the fellows were "getting square" with us for what they had suffered when they were plebes, some were putting us through "to make men of us," and a very few played the tyrant from pure viciousness. The latter always had the support of their classmates for the sake of discipline, but I don't think they were greatly liked or respected.

Some of the things we were forced to do by our tormentors were nothing short of cruelty, but after all the real problem was not to endure the exercises they put us through, but to submit in such a way as not to lose our own self-respect. Each had his own way of doing this, but I think dearie's way was the most admirable and perhaps the most dangerous.

Dearie was never anything but serene. He could wear a placid smile when another man would have groaned; but what marked him was that he contrived to infuse into his smile a something of tolerant superiority for the men from whose tyranny he suffered.

I think there were few of the upper class men who were not irritated by dearie's smile, but there was one in par-

ticular who resented it so much that he seemed determined to go to the very extreme in putting dearie through; and I, knowing dearie now, wondered how he endured so much.

One day, as dearie and I were crossing the parade ground bent on a quiet walk together, we met this man hurrying over toward the tennis court. He was going to pass us without notice, until his eye caught sight of dearie; then he stopped short, and, with language not permitted by the printer, wanted to know of dearie why he had not saluted him.

Dearie, to my utter surprise, turned so as to face the other, and then with the utmost deliberation looked him carefully over before replying; and if ever a face wore a look of studied insolence it was dearie's then.

"Because I don't have to," he said, slowly. "And if you will kindly recall what you just said to me, and accept it for yourself with my compliments, you will greatly oblige me."

"You blankety-blank-blank-blank!" cried the astounded and furious cadet. "You shall hear from this."

"The same to you and many of them," said dearie, serenely.

"Do you know what will happen now?" I gasped, as soon as we were out of earshot.

"I have been making inquiries," answered dearie, placidly, "and I think I shall have to fight."

And that is what turned out to be the case. He was privately court-martialed, so to speak, and was adjudged guilty and condemned to fight with an upper class man; not, greatly to dearie's disappointment, with the man he had offended, but with a man carefully chosen by his judges as being not too large for him.

I was miserably anxious, even though my confidence in dearie was very great; for the man chosen, while no taller than dearie, was heavier and five years older, and had besides had the advantage of three years' training at the Academy, which was no trifling matter.

I handled dearie, and should have been the calm and cool one, but in fact it was he who was calm and unmoved. He assured me the fight would not be a long one nor disastrous, and stepped out

stripped to the waist ready for his antagonist.

The place chosen for the combat was a charming spot in the woods on the road to Fort Put; and I learned afterward that it had been the scene of a great many such trials of strength and endurance.

When the man chosen to whip dearie stepped out, my heart sank lower than ever, for it was plain enough that he was well practiced in the art of self-defense; and when I noted the knots of muscle that played under his brown skin I sighed.

"I beg your pardon," said dearie, in his polite way, as the man stepped out, "but I would like to know now how long I shall have to fight."

The man smiled not unkindly and looked around at the men in charge. It was dearie's enemy who replied curtly;

"Until you've had enough."

Dearie, with a subtle mockery of which he was a master, saluted, smiled and stepped back into a posture of defense. His antagonist confidently stepped forward, moving his fists in a very scientific way and watching for an opening.

Dearie sparred quietly, stepping back and moving forward, but making no sign of aggression until the other, seeming to see his opportunity, shot out his left, apparently intending to follow with his right. But, alas, for him! He had met a master. Dearie's right had caught him under the heart and then, like lightning, his left had shot out and taken him on the angle of the jaw. He fell like a sack of grain.

"I hope," said dearie, with tender solicitude, "that I haven't hurt him."

There was a hurried and earnest consultation among our elders, while we plebes gathered together to chuckle and exult. Only dearie remained unmoved.

"This is only the beginning," he said. "I have heard of how they do this."

And he was right. He was notified to be ready for another man. He saluted with exaggerated respect, and said he was ready; and then he inquired tenderly for the man he had knocked out. Evidently he had burned his bridges behind him, and did not care how he exasperated the upper-class men.

His new antagonist was taller, heavier

and more skillful than the first. In fact, an effort had been made to select a man who could just whip him. But they had not yet taken dearie's full measure. In less than five minutes he had treated the second man as he had the first.

The upper-class men were angry enough now, and brought on a big and heavy man who should have been able to crush dearie; but our champion remained as cool and confident as ever, and sparred with the same easy assurance, even playing with his man in a way to indicate his contempt of him as an adversary.

And, indeed, that one went the way of the other two. Then another and another were brought forward, each larger and more formidable than the last, until after knocking out the sixth man, dearie asked with a respectful salute, if it wouldn't be easier all around if he began, now, at the upper end.

If this were a romance instead of a true story I would not dare go on any farther, but as this is a true story I have the courage to relate that dearie, that afternoon, stood up before fifteen men and whipped every one of them, getting hardly a mark on his own face, though he was nearly worn out, and became an easier mark for each new opponent.

And it was plain that the men were being rushed along with the intention of wearing him out. I think the upper-class men felt that only by finally overcoming him could they maintain their prestige; and it was necessary to hurry, for the time was passing rapidly, and it would not be long before we would have to report.

We plebes wanted to protest that this long ordeal was shockingly unfair, but dearie refused to let us do it, saying he could hold out till time was up. Perhaps he was expecting, possibly only hoping, for what finally happened. The instigator, the cause of all the trouble, was put up for the sixteenth man.

I shall never forget how dearie's eyes lighted up at the sight of him stepping out. Everyone, including his antagonist, noticed how dearie altered at once his

style of fighting. He crouched now and crept around his man like a panther preparing to spring.

We had no idea of what he was meaning to do to the big fellow who had so often and so relentlessly stood in front of him, ordering him to go through the exercises that almost exhausted him; but in a few minutes it was plain to us as well as his antagonist.

He acted as if he had had no previous fighting to do, so swift and agile was he in dodging and feinting. Three times he passed over openings by which he could have dealt almost disabling blows, but finally shot out his left and caught his man on the eye.

Before that he had thought to knock opponents out as quickly as possible; this one he would not knock out, but meant to mark so that no one should fail to know what happened to him.

He hammered him over the face with bruising but not disabling blows, until there was not an inch of surface to which he had not devoted his attention. Both the man's eyes were discolored, his nose was bleeding, his lips cut and swollen.

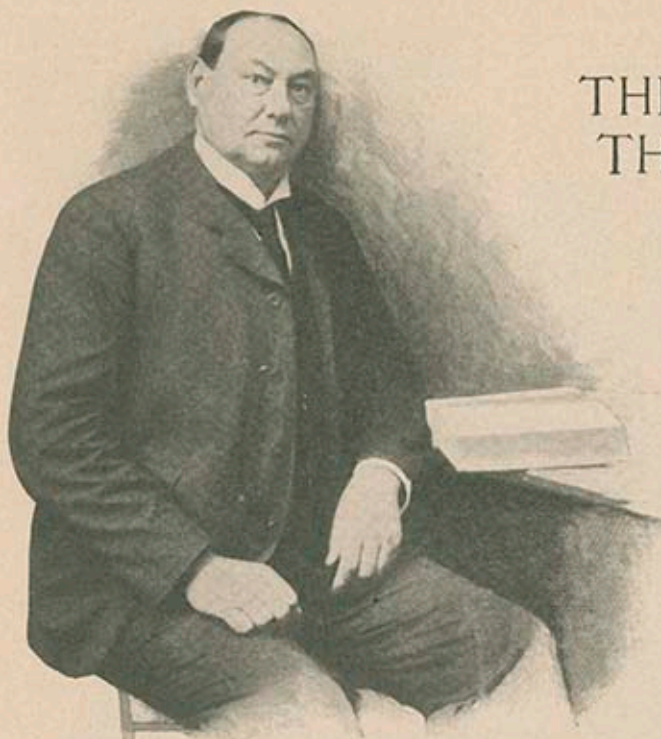
He could not reach dearie once, try as he would; and dearie would not deal the finishing blow. I saw that he meant to prolong the fight until they were separated by the upper-class men, who by doing so must admit defeat. And so the fight ended.

They interfered and said it was time to report. Dearie, panting, it is true, and covered with blood, nevertheless saluted his antagonist and said with a smile through which the bitter mockery showed plainly enough:

"At your service at any time, sir," and saluted again.

That particular man never loved dearie: everybody else did. And dearie was never called upon either to fight or to do absurd exercises again. He was the only cadet, so far as history records, who ever beat the game at the Point.

I don't know what this story proves, unless it is that it is a mighty good thing to be strong, skillful and able to take care of one's self.



Dr. H. W. Wiley, Chief of the Bureau of Chemistry,
U. S. Department of Agriculture

THE DIET OF THE NORMAL MAN

By

Dr. H. W. Wiley

CHIEF OF THE BUREAU
OF CHEMISTRY, U. S.
DEPARTMENT OF
AGRICULTURE.

lent opportunities for determining what the average man eats; not only the total amount of the food, but the natural balance of its ingredients that each one selects by taste or other preference.

The food of man consists of three important ingredients, excluding the mineral substances,

THERE is an impression prevalent among our people that we eat too much, and when the dietary of the average American is compared with that of the average European there is reason for supposing that this opinion is correct. We eat more than does the average citizen of the average nation, but it should not be forgotten, in the first place, that the American is larger than the average man of other countries, that he leads a far more strenuous life, that he works harder and often longer, and that, in general, he requires more nourishment than do his neighbors beyond the sea.

It is not to be denied that over-eating is a frequent cause of sickness and mental hebetude. After a big dinner it is more natural to sleep than to exercise, and those who are to engage in vigorous mental or bodily work are careful not to precede the period of activity by over-eating.

In our experiments connected with the determination of the effect of preservatives upon digestion we have had excel-

which are also important. We have first of all the nitrogenous foods, such as the white of an egg and lean meat; next the fat foods, as illustrated by the fat of meat and by butter, lard and oil; and third, the very important class known as carbohydrates, represented particularly by starch and sugar.

When man is left to himself and when he has access to abundant supplies of food he naturally selects from the classes of foods mentioned above a certain mixture of them that is best adapted to the wants of his body, and this natural mixture of the ingredients of foods is called in hygienic speech a balanced ration. The term "balanced ration" means such a mixture of the three classes of foods above given as will best serve the purposes of the body, promote health and growth and reduce to a minimum the waste of food materials.

I can illustrate best the quantities and the method of selection of the three classes of foods by giving a table showing the elements of food selected by eleven healthy young men under careful

observation. This table is arranged in the order of the weights, and gives the weight of each young man in pounds, the heat value measured by the calories of the average amount of food consumed in a day, the weight in grams of the protein, fat and carbohydrates entering into the food, and the ratio of the protein to the carbohydrates plus the fat, multiplied by 2.14, which is the usual method of estimating these ratios. A ratio of protein that is greater than 1 to 7 of the fat and carbohydrates is called wide, while a ratio that is less than 1 to 5 is deemed narrow. This means that in the one case there is an excess of carbohydrates in the ratio, and in the other case an excess of protein.

From a study of the data in the table it is seen that the amount of protein consumed per day is in round numbers about 100 grams. The amount of fat varies largely because some of the men eat more butter than do others. The amount of carbohydrates also varies greatly in individual cases.

In fixing these quantities but little effort was made to control the tastes of the young men at all, but they were allowed to select from the foods offered about the quantities they desired, and the data obtained are the means of the

selection made for ten consecutive days. It is interesting to see in this case that the men naturally choose about the same quantity of protein, but that they vary exceedingly in the quantities of fat and carbohydrates that they prefer. The ratios, however, are all pretty near together, none of them being excessively wide or excessively narrow.

The numbers in the columns headed "Calories" show the quantity of heat that would be produced by the food of each man for the whole day if it were burned in the ordinary way. In fact these heat values are determined by the actual burning in an atmosphere of oxygen samples of the food used. The term "calorie" means the quantity of heat necessary to raise one kilogram (2.2 pounds) of water through a temperature of 1 degree C. (1.8 F.). An inspection of the table will show at once, therefore, the quantity of heat-forming material consumed by the average man per day. The average weight of the eleven young men is 136 pounds; the average number of calories, 2,932; the average number of grams of protein consumed each day, 99; of fat, 90; of carbohydrates, 352; and the average ratio of protein to the fats and carbohydrates, 1:5.4.

Number	Weight Pounds	Weight Kilos	Protein Grams	Fat Grams	Carbo-hydrates Grams	Ratio	Calories
1	153	69.65	108	113	387	1:5.6	3263
2	150	68.00	101	88	377	1:5.7	2949
3	149	67.50	93	70	338	1:5.3	2620
4	143	64.95	112	92	366	1:5.1	2900
5	136	62.00	110	128	319	1:5.5	3047
6	134	60.80	84	62	398	1:6.3	3721
7	133	60.60	98	88	325	1:5.3	2734
8	132	60.00	105	93	350	1:5.3	2927
9	127	57.70	86	90	346	1:6.4	2718
10	125	56.99	99	83	407	1:6.0	2975
11	117	53.36	93	81	256	1:4.7	2394
Average 136		61.96	99	90	352	1:5.4	2932

From the above data it is seen that the average man weighing 136 pounds consumes, in round numbers, 100 grams (3.6 ounces) of protein, 90 grams (3.2 ounces) of fat, and 382 grams (13.6 ounces) of starch and sugar per day. The heat value of this food per day is

2,932 calories, and the ratio of the protein to the starch and sugar is 1:6.2.

It is interesting, in this connection, to know how much of these important types of foods the more common edibles contain. Beefsteak (the lean portion) contains about 18 per cent. of protein and

12 per cent. of fat. It contains no appreciable amount of starch or sugar. Good wheat bread contains about 9 per cent of protein, 0.2 per cent. of fat and 58 per cent of starch and sugar, mostly starch. Potatoes contain 2 per cent. of protein, 0.3 per cent of fat, and 20 per cent. of starch. Milk contains $3\frac{1}{2}$ per cent. of protein, 4 per cent. of fat and from 4 to 5 per cent of sugar. Butter is nearly all fat, containing usually about 12 per cent. of water. Sugar, of course, is wholly carbohydrate.

The young men whose dietary has furnished the data above described are engaged in ordinary clerical and student duties. Four of them are students in a medical college and seven are employed in the clerical and scientific service of the Department of Agriculture. Their habits, of course are largely sedentary, but all take a generous amount of outdoor exercise which is made as uniform as possible every day. The average weight of the eleven is slightly below the average weight of a full grown man, but the difference is so slight that it is not of any great consequence.

It is seen that the amount of food eaten is not always proportionate to the weight of the body. The heaviest man, it is true, eats the largest amount of food, and the lightest one the smallest amount, and in so far as the extremes are concerned the rule holds good that the quantity of food is proportionate to the weight of the body; but between these extreme limits there is little regularity observed in the proportions of food to the weight. For instance, No. 10, weighing 125 pounds, eats more food than does No. 2, weighing 150 pounds.

It is interesting to note also what quantities of ordinary foods are required to make up the dietary of the average man. To illustrate this we may give the dietary of the heaviest and lightest of the men above mentioned.

DIETARY FOR THE HEAVIEST MAN.

BREAKFAST.	GRAMS.	OUNCES.
Apples.....	93	3.3
Cereals.....	40	1.4
Beefsteak.....	74	2.6
Potatoes.....	100	3.6
Milk.....	200	7.0
Butter.....	14	0.5
Sugar.....	40	1.4
Bread.....	70	2.5

LUNCH.		
Soup.....	150	5.4
Bread.....	70	2.5
Milk.....	400	14
Canned Cherries.....	100	3.6
Butter.....	14	0.5
Sugar.....	20	0.7

DINNER.		
Roast Beef.....	65	2.7
Potatoes.....	100	3.6
Tomatoes.....	70	2.5
Bread.....	70	2.5
Milk.....	200	7.0
Currant Jelly.....	25	0.9
Rice Pudding.....	100	3.6
Butter.....	14	0.5
Sugar.....	20	0.7

DIETARY FOR THE LIGHTEST MAN.

BREAKFAST.	GRAMS.	OUNCES.
Apples.....	98	3.5
Cereals.....	40	1.4
Beefsteak.....	80	2.9
Potatoes.....	100	3.6
Bread.....	50	1.8
Milk.....	200	7.0
Butter.....	14	0.5

LUNCH.		
Soup.....	150	5.4
Bread.....	40	1.4
Milk.....	200	7.0
Cherries.....	100	3.6
Butter.....	14	0.5
Sugar.....	10	0.4

DINNER.		
Roast Beef.....	80	2.9
Potatoes.....	100	3.6
Tomatoes.....	70	2.5
Bread.....	50	1.8
Milk.....	200	7.0
Currant Jelly.....	25	0.9
Rice Pudding.....	100	3.6
Butter.....	14	0.5

The above dietaries may be considered as about normal for the average man engaged in such sedentary employment as has been described. For a man engaged in moderate physical labor the dietary should be increased about 15 per cent.; in other words, such a man would consume about 3,500 calories of food per day. For a man at hard labor the number of calories consumed would vary from 4,000 to 4,250.

In order that health may be maintained and the body well nourished it is important that the balance of the ration should not be very greatly different from that which is given, namely, about 1 to $5\frac{1}{2}$.

If our people would select their dietaries on some such scientific basis as has been described it would be better both in respect of economy in food and in efficiency of bodily and mental action.



Mr. F. D. Moser

AN AIR BATH IN TWO FEET OF SNOW

THIS photograph was taken out-of-doors on a stormy winter's day. Mr. Moser, absolutely naked, walked through snow above his knees for a distance of thirty feet to pose for the picture, and returned without suffering the least inconvenience. The thermometer stood at ten degrees above zero, Fahrenheit. This shows a highly cultivated degree of ruggedness and strength, a free circulation of pure blood, and a vigorous constitution. If people would take a cold bath more frequently and stick to the practice *throughout the winter* they might all attain this splendid degree of vigor. The great cause of an oversensitiveness of the skin is due to the prevalent habit of most people of hurrying out heavy undershirts, chest and stomach protectors, heavy *woolen* stockings and an extra woolen lining placed in the shoes as soon as the first sign of winter appears. Mr. Moser is certainly iron-proof against the array of winter bug-bears—coughs, cold in the head, stiff-neck, tonsillitis and a host of other maladies.

CURED OF TYPHOID FEVER

THE accompanying photograph of Geo. A. Stevenson, a young man of 29, 25th Ave. W., Duluth, Minn., who rejected doctors and medicine to take up physical culture at the earnest advice of a friend, is not without interest in that his folks and his doctors tried to dissuade him from his intention at every step. Mr. Stevenson was eating his meals while in bed, but upon the advice of his friend he began to recognize that this process was what was keeping him in bed. He stopped the stuffing process and decided to fast. He could not drink water, but ate ice. The kind, but so often disastrous, remonstrance of friends and parents was in vain, and, instead of the predicted starvation, Mr. Stevenson *gained every day*. In five days the fever became normal, and on the sixth day Mr. Stevenson got up from bed for a few minutes at a time, and in ten days he was out of bed entirely. Mr. Stevenson, in writing of his cure, says: "Now, when anything goes

out of order, I just quit eating and get all right in a short while, thanks to physical culture."



SCIENTIFIC MEDICINE ALL GUESS- WORK

A HEALTHY MAN VISITS TEN PHYSICIANS. TO EACH HE GIVES IDENTICAL SYMPTOMS, BUT EACH PHYSICIAN DIAGNOSES HIS DISEASE DIFFERENTLY

By Alexander Marshall

I present herewith an article that will astonish even some of the most ardent Physical Culturists. The physicians who diagnosed Mr. Marshall are no doubt conscientious men, who are endeavoring to do the best they can with the poor "tools" given them by so-called scientific medicine, but the results of thus comparing these medical diagnoses show the deficiency of medical treatment in its most glaring detail.—BERNARR MACFADDEN.

DR. LEO H. GODSON, 212 WEST 124th STREET,
NEW YORK, N. Y.

R. Pulv. Kalmi ℥i
 Pulv. Bicarb. ℥ss
 Pulv. Spic. ℥ss
 Tinct. Nuc. Vom. ℥ss
 Resorcin ℥ss
 Aqua Menth. f. f. q. ad ℥ss
 M. Sig. ℥ss ℥ss in water before meals
 at 164 B
 W. H. H. H. H.

Prescription Given by Dr. Godson, Who Stated That the Trouble Was Caused by Stomach or Eyes

IF ANY human being ever doubted that scientific medicine, so-called, is all a matter of hodge-podge, drug-store dynamite and destructive colored bullets which kill, let him read this article, a plain statement of my experience with ten reputable physicians, and I am inclined to believe that he will agree with me in the above conclusion and that the "science" of medicine has not a single earthly excuse for being called a science. It is nothing but clumsy guessing from start to finish.

DR. CHAS. T. WHYBREW, 230 WEST 84th STREET,
NEW YORK, N. Y.

R. Hyph. sulph. ℥ss
 Quinine sulph. ℥ss
 Ac. sulph. dil. ℥ss
 Pepsin-essence (Frad) ℥ss
 Ag. pum. ad. ℥ss
 M. S. I saw prompt after each meal

Prescription Given by Dr. Whybrew, Who Stated That the Trouble Was Caused by Chronic Malaria in Its Worst Form

I never did believe much in medicine. The little experience I have had in the past has made me skeptical as to its value as a curative power in disease; but, if you wish to have all faith in medicine "smashed" so thoroughly that it will never pre-empt the smallest corner of your brain again, fully and clearly understand the symptoms of your complaint, and then visit several doctors and have each one diagnose your disease. I

DR. EDWARD J. WILLIAMS, 111 N. 3rd STREET, N. Y.
 R. Liq. Opium Anod. ℥ss
 Liq. of Ammonia ℥ss
 Syr. Ammonia ℥ss
 Ag. pum. ℥ss
 M. S. I saw prompt after each meal

Prescription Given by Dr. Williams, Who Stated That the Trouble was Caused by the Optic Nerve, or by Tobacco Heart; That There Was Nothing the Matter with Stomach

may have had a little faith when I started, but after the experience recorded in this article, I would far prefer to write out the funeral verdict for myself than to have some other man do any so-called scientific guessing on me.

I started out to call on ten New York physicians. I wanted to really discover for myself, and also for the benefit of the readers of this magazine, as to how much knowledge of disease is possessed by the average physician. I wished to understand whether or not this magazine is so much to be condemned for the rough language it sometimes uses

Dr. P. J. LYNCH,
216 East 12th Street,
NEW YORK.
Telephone 3928 12th St.

R

*Mental Depression of
East Colonial Co of
Public Service Co
Distress in July 1911
Cable News at Baltimore
Lynch*

Dr. P. J. LYNCH
216 East 12th Street,
NEW YORK.
Telephone 3928 12th St.

B.

*Divine Joseph M
Ammoniac 3ii
Inf. Pulm in Capsulas
No xx hair
One dinner daily
Lynch*

Prescription Given by Dr. Lynch, Who Stated That the Trouble Was Caused by Neuralgia

against the medical profession. After giving the matter careful consideration, I concluded that I would state to each physician that I had had a headache for about three weeks and that it was worrying me; that in other ways I thought I was a healthy man, but that I believed it would be to my advantage to have my disease diagnosed and remedied.

To each physician on whom I called, I explained my symptoms as described. That there might be no doubt as to the accuracy of my description, I took my wife with me, and she corroborates every statement made above as absolutely accurate.

I first called on Dr. George H. Godson, 301 West 114th Street. After describing my symptoms to the doctor, he asked me if my appetite was good and if I slept well. I told him that my appetite was pretty good and that I slept from six to eight hours every night. He then asked me my occupation, and then

DR. OSCAR H. SMITH,
100 WASHINGTON PLACE,
NEW YORK.
Telephone 3928 12th St.

R

*Dr. Smith's
Cranial Sada 3ii
Chromatium 3ii
No. 1000 3ii
Ment. Hygiene 3ii
Sed. Hygiene 3ii
Lynch*

*Oscar H. Smith, M.D.
100 Washington Place*

Prescription Given by Dr. Smith; Who Stated That the Trouble Was Caused by Nerve Affection; Patient Inclined to be Paralytic

there was some discussion as to the price of treatment. After asking me several more questions, he gave me a prescription and a small box of tablets. He said that the tablets were put up especially for him and cost more than three cents apiece.

I asked him the cause of my headache. He said it came from my stomach or from my eyes, but he was sure it was caused by my stomach being out of order, and that the medicine he prescribed for me was for my stomach and would aid my digestion. When the medicine ran out, I was to call on him again.

I then visited Dr. H. C. Williams, 201 West 120th Street. On inquiring of him as to the cause of my headache, he was of the opinion that it was induced by the optic nerve, or that I had a tobacco heart. He informed me that there was nothing the matter with my stomach, but that he would give me a nerve tonic,

DR. H. C. WILLIAMS,
201 West 120th Street,
NEW YORK.

*Chinin; sulphur: 40
Sulphur; Fowler 40
Glycerin 30
Liquor. Sassafras 1/2
S. A. Sassafras 1/2
Lynch*

Prescription Given by Dr. Mennen, Who Stated That the Trouble Was Caused by Liver Being Out of Order; Possibility of a Floating Kidney

and that, if that did not fix me up, he would send me then to an eye specialist, a friend of his. He stated that his friend would not charge me very much for examining my eyes, and that he could then determine to a dead moral certainty as to the cause of my trouble. He gave me a prescription for the heart and nerves, and when the medicine was used, I was to call and see him again. If I was no better, then he would give me a note to his friend to have my eyes examined. He stated that the charges of his friend would be more reasonable if I presented his note.

I then called on Dr. J. C. Street, 237 West 34th Street. After talking to him about an hour, he informed me that he was not practicing medicine, but that he could recommend me to a friend who was a fine doctor and who would be moderate in his charges. He then gave

DR. JAMES VAN P. OGLESBY,
 22 Park St., near W. Fourth, NEW YORK.

R
 Liqueur Potassii Arsenitis ʒi
 Sig. ʒtt̄ t̄id and wear
 as directed Ophthly

DR. JAMES VAN P. OGLESBY,
 22 Park St., near W. Fourth, NEW YORK.

R
 Nonyang chloride Trita ʒtt̄
 Sola Ricini ʒtt̄
 ʒtt̄ Ft in dose ʒtt̄
 Sig. One very half-hour Ophthly

Prescription Given by Dr. Oglesby, Who Stated That
 Trouble Was Caused by Gases on the Stomach, Gas-
 tritis, and Digestive Organs Out of Order

me the name of Dr. B. Frank Thomas, 71 West 88th Street. Dr. Street said he was teaching several young men phrenology, and wanted to tell my fortune.

Dr. Chas. T. Whybrew, 236 West 34th Street, was next visited. After explaining my symptoms to him, he told me that I had malaria in its worst form, and that it had been in my system for a long time, but that it was just commencing to show itself. He stated, however, that if I would follow his instructions he could get it out, but it would take some time, as malaria was a very difficult complaint to cure, especially when in the system for a long time. He gave me a prescription and said that I could come in and see him in about a week, and that if I was not all right he would give me then a thorough examination.

I next called on Dr. P. J. Lynch, 216 East 13th Street. After thoroughly understanding my symptoms, he informed me that I had neuralgia, and that he could cure me in a few weeks, if I would follow his instructions. During our conversation, he stated that he had been

DR. RICHARD W. MULLER, 67 East 4th St.
 NEW YORK

R
 Hydrargyri Chloridi
 Quitts ʒi
 Solutio ʒi
 M. ʒi. shake ʒi
 Sig. ad longum
 Int. ʒi

Prescription Given by Dr. Muller. He Did Not Care to
 Tell Patient the Cause of His Trouble; Thought
 it Would Scare Him

practicing medicine for forty-seven years, and had had many cases like mine. He gave me a prescription, and stated that, when I had taken all of this, I should call and see him again.

I asked him if he was sure that it was neuralgia, and said that I was afraid it was some organic trouble. He answered that he was fairly sure that neuralgia was my trouble.

My next visit was to Dr. J. H. Mennen, 4 East 8th Street. After I had said my little speech about my symptoms, he informed me that my liver was out of order. This trouble, he stated, was caused by the gases not being thrown off properly, that the blood absorbed the gases and caused the liver to become inactive. He said that there was a possibility of its being a floating kidney, but he hardly thought so.

This physician then asked me who sent me, and I told him that a friend had told me that he was a good doctor,

R
 Biont
 Tab. Pheno-Biont. ʒii
 (ʒ. E.) XII
 D. one ʒ. 3. l.
 Farr's

Prescription Given by Dr. Farr, Who Claimed that
 Trouble was Caused by Drinking Too Much Coffee

who would not charge me more than a dollar a visit. This doctor then informed me that there were many medical quacks in New York, and that they would pull one's leg out of the socket if they could. He stated that these quacks stood in with each other and called themselves specialists, and would send a patient from one to the other, charging from \$25.00 to \$100.00 a visit. He stated that if there was nothing the matter with the patients, the quack would make them think there was, and would induce them to continue calling as long as they would "stand for it." He told me how a friend of his had had his leg pulled by several quacks who called themselves doctors, and that they made him think that his wife was afflicted with every known ailment. He said that one quack had sent his friend's wife to see another, who had charged her \$25.00 or \$50.00, then she had been sent to an-

other, who charged her a similar fee, and that they had continued this game until the woman really believed that she was incurably sick.

One of these quacks had told her that she must stay in bed a few days, and about this time he met her husband (his friend), who told him about his wife and asked him to call. He called at her house and found her in bed, and, after making a thorough examination, instructed her to get up and take some exercise and get some fresh air. She followed his advice and was all right in a few hours. He stated that there wasn't anything the matter with her, and that she was merely nervous from the various treatments that had been prescribed for her. He stated that he did not believe in so much medicine. He said that there were more people killed by medicine than were cured by it. He also informed me that he was a graduate from three different universities.

Dr. Oscar G. Smith, 110 Washington Place, was next visited. He stated that my headache was caused by nerve trouble, and that I was inclined to be a paralytic, but that there was no use in being scared as I was too young to have a paralytic stroke, and that he could fix me up in a few weeks, if I followed his instructions. He gave me a prescription and said that it would be changed the next time I called.

I then called on Dr. James Van P. Oglesby, 65 Perry Street. This physician said that my headache was caused by gases in the stomach, which might be called gastritis, that my digestive organs were out of order, but believed that I was all right in every other way. He informed me that if I attended to the trouble right away, it would be all right

in a day or so. He gave me a prescription which he said would fix me up. If the trouble did not stop by the time I finished the medicine, I should call on him again.

After this, I visited Dr. Edgar H. Farr, 32 West 46th Street. He informed me that my trouble was caused by drinking too much coffee, and that I should stop drinking coffee, as it was like so much poison to my system, and not to eat any meat; yet, if I did eat meat, to eat as little as possible of it. He instructed me to diet myself for a few weeks. He gave me some medicine which I was to take as directed, and in a week or two I was to call again.

My next visit was to the office of Dr. Richard W. Miller, 147 East 18th Street. He stated, after listening carefully to my symptoms, that he would not tell me what was the matter with me, as he did not want to scare me. He said he might tell me the next time I called. He gave me a prescription, and said I should call again when the medicine was used up. He had some scales in the office with which he weighed me, in order that he might more easily determine my improvement.

I then called on Dr. W. Lang Somerset, 83 Lexington Avenue, who stated that my trouble was caused by my kidneys. He gave me some tablets and advised that I should take two of them three times a day for two days, and at the same time should take six grains of quinine, two grains before each meal. He instructed me to bring him a specimen of my urine, and he would then commence to treat me. First he wished to make a thorough examination in order to determine how far gone my kidneys were.

"Mary, I wish you would be a better girl," said a father to his little girl. "You have no idea how sorry I am that mamma has to scold you so much."

"Oh, don't worry about it, papa!" was the reply. "I'm not one of those sensitive children. Half the time I don't hear what she says."—Exchange.

Three different waiters at a Southern hotel asked a little, prim, precise Harvard professor at dinner, in quick succession, if he would have soup.

A little annoyed, he said to the last waiter who asked, "Is it compulsory?"

"No, sah," answered our friend and brother; "no, sah. I think it am mock turtle."—Clipped.

Editorial Department

Accept every conclusion you find in this magazine for whatever your own reason shows it to be worth.

There should be no authority for you higher than your own intellect.

No human being is infallible. Every one makes mistakes; therefore no one has the right to place himself on a pedestal as an authority on any subject.

If you accept absolutely, without full and due consideration, the theories of any one it is an acknowledgment of your own mental deficiencies. Accept nothing that your own common sense, your own reasoning power, do not endorse as truth and fact.

IN the past most of our attention in the exposure of frauds has been given to patent medicines and electric belts. Though these are probably the worst evils that the suffering public has to contend with, there are other humbugs which deserve attention. It can be said in their favor, however, that they do not poison the system with strong drugs, or excite a false stimulation of the functional system that can only ultimately result in serious harm. The particular frauds

Personal Magnetism, Absent Treatments and Other Frauds

to which I refer are absent treatments, personal magnetism, magnetic healing and synonymous methods of working on the credulity of the weak and ignorant. They are nearly all nothing better than preposterous frauds and humbugs. In some few instances they may produce temporary benefit by working on the imagination of the patients, but as far as accomplishing any real, practical and permanent good is concerned they are absolutely powerless. They teach you to depend on dreamy theories that do not in any way act upon the real seat of the trouble. You can go on with their dream treatments and deceive yourself into all kinds of imaginary conditions, but in the end you will be no better.

The cure of disease, the remedying of abnormal manifestations, depend upon radical methods that accomplish results. Your complaint, whatever it may be, must be understood. You must discover its cause and then avoid it, and follow those methods that are essential in the building of physical vigor.



YOU can dope yourself with food just as you can with alcohol. Clear, satisfactory thinking is not possible if the stomach is continually stuffed to its utmost limit. If you want your brain to be as clear as a bell, if you want to be able to reason to a satisfactory conclusion upon some important problem, try fasting a few meals.

The Effects of Gormandizing on Character

An experience of this kind will really amaze you. Problems that have seemed intricate become clear, plain and easily solved.

To be successful in this modern age, you must be bright and alert and active at all times. Success depends upon these superior powers, depends upon the ability to act quickly and intelligently in the emergencies that are presented by the various opportunities that come to one during life.

Gormandizing is almost as bad in its ultimate effects as moderate alcoholic stimulation. It depreciates man's higher characteristics. It lessens his nervous sensibilities, takes away all the delicate acuteness possessed by the nervous organism. It will develop the selfish and vindictive element in your character. Nearly all gormandizers are utterly selfish and extremely vindictive. A large part of the energy of such men is often spent searching for a method of injuring their supposed enemies. Happiness is unknown to such characters; they never secure anything of value from life. Their highest and noblest characteristics are dulled and deadened. The lowest elements in their natures guide all their efforts, and I regret to say that such men as these are not scarce in the business world of to-day.



THE body is a machine and like a machine it is capable of wearing for a certain period. Conditions vastly influence the length of this period. If you are a bad engineer, if you do not care for the body properly, furnish it with the essential elements to properly nourish all parts, the length of its life will be vastly lessened. If you are a capable engineer and supply that which is necessary to keep the blood pure, the muscles and nerves strong, the body will continue to manifest life to the utmost limit.

Human Mechanism and Longevity

Much interest has been aroused recently in the subject of longevity. There are many points of similarity between the body and a complicated piece of delicate machinery. If a good machine is used moderately and oiled frequently, it will last for a very long period; if it is used immoderately it will quickly wear out. If it is allowed to remain entirely inactive, it will rust and quickly become useless. The conditions that govern the body are almost identical. Immoderate use will shorten life; temperate use will lengthen life; but entire inactivity is the worst evil of all.

It is therefore quite clear that a temperate use of every part of the body is required to maintain life for the longest possible period.

Another point of similarity between the body and a delicately constructed machine is the dependence of one part upon another. In other words, any particular defect in any part will seriously endanger the entire machine. The human body is often compared to a chain. A chain is as strong as its weakest link; the body is as strong as its weakest part. The weakest part is always attacked when the body is debilitated. If the defect is in your lungs, it will be consumption; if in the heart, it will be heart trouble; if in the stomach, it will be digestive ailments. This fact illustrates very emphatically the necessity for strengthening all parts of the body in unison, and the especial importance of strengthening all defective parts.

The life of a human body is maintained by the vital organs—the heart, the lungs, the nervous system, the organs of assimilation, etc.

If you desire to live long, strengthen the vital organs of the body, and never compel these organs to work to exhaustion.

You often hear of an athlete training "stale"—or in other words, he has trained so hard that the life and energy and "snap" disappear. He has exhausted

his muscular system, overused, tired out his body to such an extent that but little energy remains.

If an athlete were to continue this overtraining for a long period, he would soon wear out his muscular system and would quickly become an old man. Now, the internal organs of the body constitute the internal muscular system. Temperate use of these organs is essential to acquire and maintain the highest degree of health; but, like the external muscles, they can be overused and overworked, if compelled continuously to perform exhausting labor. Like the external muscles of the athlete when subjected for a long period to overuse, elements of decay and old age soon appear.

In other words, you can wear out your internal organs by exhausting overwork just as you can the external muscular system. It is, therefore, clear that the less effort required of the internal functional system in maintaining life and health, the longer the strength of the internal functional system will be retained and the longer one will live. This brings us to the plain conclusion that the less you eat in maintaining life, health and strength, the longer you will live.

Every meal which overloads the stomach, and which requires severe efforts on the part of the internal functional system, tends to shorten the span of life. It quickly wears out the internal functional system. If you eat too heartily even of the most wholesome food, results of this nature are undoubtedly produced; but if you indulge your appetite for fancy, complicated, highly seasoned dishes, as is usual with most civilized beings of to-day, your years of life will be greatly shortened.

Under such circumstances the internal functional system is kept continuously in an exhausted condition. If you go still further and make a habit of using alcoholic liquors and other poisons to stimulate these internal organs to increased activity, your life may be cut off even before complete maturity.

If an athlete were compelled to run every day for his life, or forced to perform some extraordinary feat of strength to escape serious danger, the external muscular system would soon wear out from such exhausting labors, and when the internal functional system is compelled daily to make exhausting struggles in eliminating alcoholic and other poisons the strain would naturally bring about early decay and death.

Bernarr Macfadden