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Life & Health

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A FLORIDA SCENE

Life & Health

HOW TO LIVE

EDITORS

L. A. Hansen — G. H. Heald, M. D.

VOL. 34 — JULY, 1919 — No. 7

EDITORIAL

Work a Blessing

To class manual labor as a matter of misfortune is a mistake. True, the convict is sometimes sentenced to serve so many years at hard labor as a punishment for crime, but that does not stamp labor in general as a penalty. True, too, the ground was placed under a curse because of man's sin, making it necessary to till the soil in order to keep down thorns and thistles, and make it produce food.

Adam was told it was for his sake that the ground would require working, and that in the sweat of his face he should eat bread. We can well take it that useful employment, toil and physical exercise, was thus made a part of man's program as a means of salvation, physical at least, and no doubt helpful morally.

Not only does work save the mischief that idle hands would do, but in the very doing of the work is there positive, definite, and certain benefit. The entire being, moral, mental, and physical, is dependent on the proper working of the human machine. The body, with all its functions, is normally a living, moving, going thing. Activity is the very law of its life and being.

Work a Necessity

The body is well compared to a remarkably constructed and adjusted machine, with parts that can become useless through inaction or worn out by overwork. Rusting is fully as effective in destroying machinery as is running it too much, and has the additional disadvantage of being nonproductive. The proper adjustment of all the parts of a machine, kept in running order *and run*, is what makes the machine worth something. Unused machinery means deterioration and wasted investment.

Every part of the physical being, each organ, each muscle, and each faculty, has its place, and must be used in order to fill it. Not only that, but every other part is related to it; and the proper development of all and

the well-being of the whole depend upon the harmonious working of each and every part.

The mind cannot do its best if, while it is kept at work, muscular exercise is neglected. Sedentary workers have their troubles, plenty of them, and serious enough. The exercise of any one set of muscles to the neglect of others will not give balanced vigor. Exercise in variety is necessary to perfect development and good health.

Work a Cure

Not only should we work in order to keep the system in working order, but we need, in most cases of illness, to use properly directed employment as one means of getting well. Some cases cannot recover until a program of suitable work is adopted. Occupational therapy is a recognized medical necessity nowadays, and the treatment goes farther than mere gymnastic exercises.

Gymnasium exercise is good as far as it goes, but useful employment, especially outdoors, is better and goes farther in health building. Work in the open air and sunshine is real medicine; it has curative power. The strengthening of the heart, the quickening of the circulation, the removal of blood impurities, the tonic effect on the liver, kidneys, lungs, stomach, and bowels, the improvement of the digestion, the invigoration of the mind, and the promotion of the entire health, may be placed to the credit of judicious exercise.

Work a Gain

We are so accustomed to value labor at so much an hour that we do not appreciate it for anything except what it will bring in cash returns. Some people will not do a stroke of work unless it goes to fill the pay envelope. We reckon our garden profits on the basis of what we pay out for seed and the amount of labor we expend.

Who thinks of charging up so much an hour for swinging Indian clubs, playing golf or lawn tennis, going boating or swimming, or running an automobile? And yet, probably none of these give us the returns in actual health of body and mind that many forms of useful employment do. Play is good, very good, and not to be discounted. Work, too, is a God-given blessing, deserving of its greatest advantage. L. A. H.

* * *

The Moral Cancer

We fear what is comparatively strange, and have less fear for what is more familiar, though it may be more dangerous.

If a leper is known to be at large, there is an immediate panic until the " wild animal " is caged. We seem to have attacks of hysteria over this disease, which in any event is very slowly transmissible, and not nearly so much of a menace as some suppose.

But the social or venereal diseases seem to give us comparatively little concern, though they are known to be sapping the life, mutilating the bodies, and reducing the efficiency of millions of our population. The condition is so

serious that the United States Public Health Service is conducting an active propaganda of education in the attempt to lessen the evil.

From what we know of these diseases it is safe to say that they are spread very largely through the "red-light districts," the shady streets of our cities and towns — in other words, by fallen women and fallen men; and through the fallen men innocent wives and children often suffer.

It then becomes the duty of sanitarians — of those who are genuinely interested in the health of the race — to do all in their power by education and by legislation to reduce the amount of prostitution and of illicit intercourse.

While all such measures are commendable from a public health standpoint, they are doubly so from a moral standpoint. Even if we lay aside the religious incentives for a clean life, we cannot escape the fact that the clean people are the hope of the world. There are those who though not clean morally, are careful enough to avoid physical infection; but they are moral lepers. Whatever a man himself may be, he does not want his sister or his mother or his wife to associate with such a man. Even in the judgment of the moral lepers themselves, a clean life is the best.

So, then, whether we look at it from a religious or a moral or a humanitarian standpoint, every argument is in favor of the suppression of vice; and there are no valid arguments on the other side.

The principal argument held up by the other side is that the physical necessities of young men demand some outlet. This has been proved to be false. The so-called physical necessities of young men are nurtured by smutty stories, lewd pictures, evil companions, and evil thoughts. The street life and the surroundings among which many of the young are brought up, are well calculated to develop abnormally the sexual desire, and to confirm the impression that it is necessary and right to indulge it. The example and the stories of the young men lead on the younger boys. So long as such an atmosphere exists, the young will continue to inhale the moral pollutions. The task of those who have undertaken to bring about a reform is tremendous; but as the liquor evil is beginning to fall before the patient, steady blows of those who were once looked upon as visionaries, so may this evil be undermined by persistent, untiring effort. The drink evil has always been a boon companion of sexual vice, and when one goes the other will be scotched.

G. H. H.

* * *

Our Next Fight, Against Tobacco

The victory for prohibition just scored in our country reveals the great power of public opinion when it is fully aware of existing conditions which militate against the welfare of our people healthwise. The campaign against alcohol conducted by the temperance societies of the land has so educated the people that public opinion has finally dominated the situation, has assumed control over appetite and greed, and has said, "Thus far and no farther," to the waves of intemperance that beat so high a few years ago. Now a highly intelligent people in the greatest country in the world has achieved the novel and enviable pre-eminence of being the pioneers in this battle against one of humanity's greatest enemies, intemperance — and all this because of education on the evils of alcoholism.

Now! One great victory nerves for another. One hardly dares to say it in the face of the present high and popular wave of enthusiasm in ministering to

the comfort and pleasure of our noble soldiers through the distribution of the siren cigarette, but the evil influence of tobacco upon the health, happiness, and morals of our people is second only to that of alcohol.

One of the next great fights against evil in our beloved land is to be a warfare against tobacco. One of the great victories that will come in the near future is a victory over Dame Nicotine, as complete and as much needed as the victory we have just scored over King Alcohol. Previous to the war, some progress had been made in an effort to stem the tide of intemperance in the use of tobacco. A considerable number of young men could be found who were free from the use of the weed. Now few return from our camps and the trenches with untainted breath and unstained fingers! How excessive has become the use of the narcotic among those who were moderate users before the war! How great has become the increase in the use of the weed as shown by statistics! A system of education must be instituted at once, showing the uselessness of the habit, its wastefulness and its harmfulness.

Abundance of evidence can be summoned to show that, in its harmful effect, tobacco is little less injurious than alcohol. The waste in money in its use stands next to alcohol. Why should such a charge of wastefulness and of injurious effects be tolerated from this source when we are condemning it from the other? Why condemn alcohol and condone nicotine? Let us study this matter in an unbiased way, and with open mind settle the question of the status of tobacco. If it is of value and is beneficial, let us all use it,— men, women, and children. If useless, wasteful, and harmful, let us condemn it to the same fate that we have rum. The American people can be depended upon to render a just decision and to pass a just judgment on the subject when they have had an opportunity to know the facts. So give us the facts on tobacco. W. A. RUBLE, M. D.

THE law of sowing and reaping holds good in physical living as well as in the spiritual.

If we would reason from cause to effect, we should be more reasonable in our living, and thus give less cause for harmful effects.

God's decalogue was written by his own finger on tables of stone. He has written his law of health in the same way on our physical being, not to be effaced or changed.

If people were as anxious to preserve health as they are to get well when sick, there would not be so many sick people needing to get well.

Life is not intended to end with what we get of it now; the real life comes hereafter.

Whether a man follows a high or a low plane of living depends on whether the higher or lower nature rules.

The body of man is the only medium through which the life of Christ can be manifested in actual living.

Since God made man in his own image,— a man, likeness of God,— man must be very dear to God.

That God has a special interest in sick people is seen in the way Jesus treated them when he came to reveal to people what God wanted them to know.

Home Health and Industrial Welfare Hang Together

L. A. Hansen

SEVERAL of our leading articles this month deal with industrial health. Such articles may at first seem more or less technical. They may deal with some of the mechanical phases of industry, the application of hygiene to factory construction and equipment. But let us remember that industry does not stand merely for a lot of buildings and machinery, though we can scarcely think of it without a picture of these in mind. The real life of industry is the great mass of living, working human beings, crowding into the gates at morning, working with brain and body the livelong day, and streaming out again at night.

Our entire manufacturing industrial system, with its very existence and its efficiency for production, is dependent upon the men and women, boys and girls, going to and from the factory. Our industrial life, and that means a large part of our national life, consists in these workers being able, day after day, to fill their places at the workbench or at the machine. It comes down to the very heart of the question to say that the health of the individual worker determines how strong our industrial life shall be and what shall be the quality and quantity of our production.

Industry is wise to give attention to the health of the individual. Big business could not deal with a bigger business question. Ventilation, light, comfort, and general welfare for the worker mean dividends to the company. The preservation of the health of factory hands is an asset to the concern.

But further: looking after the physical welfare of fellow beings during the hours of the workday, is essential to the well being of the entire life of the worker. It is impossible to separate the interests of employer and employee when it comes to the health question. Quitting time does not draw a line where the interest of one stops and the welfare of the other begins. Factory conditions, good or bad, reflect themselves in the home life as well.

So, too, do the influences of home conditions and the effects of personal living make themselves felt in the factory and shop. Industrial welfare cannot wholly take care of the health of the worker. Public health measures for the masses have their limitations. Health regulation by wholesale is not possible. The line of health defense begins with the individual.

Dust removal in the factory cannot take the place of clean housekeeping at home. Good light, fresh air, clean toilets, and pure drinking water must be supplemented by similar provisions at home. A lunch poorly selected and badly cooked, may militate against many well-meant measures in the workshop. Unhealthful living out of work time on the part of the employee will undo all that may be done for his health advantage by the employer. It is a matter of mutual co-operation and individual interest.

"Taking the Dust Out of Industry," by W. E. Bliss, M. D., tells of the danger of dust, and the principles given are applicable to many conditions outside of industrial plants.

The article "Industries and Their Effect on Health," by E. B. Carr, M. D., gives important advice to the factory worker. Note especially his advice in the closing paragraph.

"Light and Health," by J. A. Pines, M. D., gives valuable advice on lighting that will mean the saving of precious eyesight.

The counsel given by these doctors is to be appreciated by all, industrial workers and others.

Spinner in a Cotton Mill

Taking the Dust OUT OF Industry

W. E. Bliss, M. D.
Superintendent New England Sanitarium, Melrose, Mass.

A Glass-factory Hand

OF the 44,130,000 American wage-earners of both sexes, as estimated for the year 1915, probably 5,600,000, or 12.7 per cent, work under conditions more or less detrimental to health and life on account of atmospheric pollution.

That the constant inhalations of dust, as a necessary condition of daily labor, result sooner or later in the appearance of grave and characteristic lesions which lead to premature breakdown and death among the workers, is a matter of common medical experience.

In the accompanying table will be found a list of those industries in which the laborers suffer exceptionally from the presence of dusty particles or other irritating matters in the air of the apartment where their work is carried on. In this table the mortality of the several dust-producing occupations is contrasted with that of agriculturists, who have been shown to suffer from the effects of dust to a less degree than any other workers.

From this table, it would appear that there are twenty industries in each of which the mortality from tuberculosis and respiratory diseases together is more than double that of agriculturists.

Dust, apart from its relation to respiratory diseases, also plays an important rôle in diseases of the eye, ear, nose, and throat as instanced by an undue prevalence of chronic inflammatory conditions of these organs in lime, cement, and hair workers, and by the frequent occurrence of ulcerations of the nasal septum in chrome, chlorine, and cement workers. It has also been shown that even flour and sugar dust, usually considered quite free from danger, may be converted into lactic acid in the mouth and possibly increase the virulence of disease germs, as evidenced by an undue prevalence of caries and pneumonia in flour and sugar workers. The dust generated in the manufacture of pearl buttons from the shells of certain mussels, is liable to produce a peculiar form of osteomyelitis, involving especially the long bones of youthful workers, and other affections noted under mother-of-pearl workers.

A combination of dust, sweat, and heat also favors the development of skin diseases, as seen by the undue prevalence of furuncles and eczema in persons exposed to mineral, metallic, sugar, flour, aniline, and other dusts. Since dust and germs often go hand in hand, there is little doubt that in many instances occupational infections are conveyed by means of infected dust. The effects of smoke and soot upon the health of workers and the community has been studied by Ascher and by numerous antismoke commissions, both here and abroad. The results everywhere show a distinct relationship between the smoke nuisance and the diseases of the respiratory organs, especially pneumonia.

PREVENTION OF DUST FORMATION

There are a number of occupations in which dust production can be reduced to a minimum by the application of oils, sprays of water, or jets of steam. The wet processes are especially applicable to the metal, lead, and pottery industries, to rock drilling, mining, blasting, stone crushing, cutting, etc. Dr. Watkins-Pitchford, in discussing the prevention of phthisis among certain mines, describes in detail the present methods of drilling and how the dangerous quartzite dust, as soon as it is found, is converted into mud by keeping the drill hole and surroundings wet with water. This may be done by means of a syringe or spraying ap-

paratus, while some type of rock drills provide for the automatic flushing of the hole.

In blasting operations, similar good results in laying dust have been attained by the application of water spray or steam just before the charge is fired. This is not only important in the prevention of dust inhalation, but also to prevent disastrous explosions of coal dust in coal mines.

PREVENTION OF DUST AND FUME DIFFUSION

Technical experts have done much to prevent the escape of dust and fumes at the point of dust will be thrown by centrifugal force into the hood and carried off by the current of air into a suction pipe attached to the hood or hopper. The suction pipes attached to different hoods enter a main suction pipe. The main or trunk line is usually below the floor, and empties into a discharge pipe, connected with an exhaust fan run at such a rate of speed as will produce a velocity of air sufficient to carry off the dust and fumes. It is very important that the mechanism be so arranged that the dust and fumes will be drawn away from the face of the worker, that is, downward and backward.

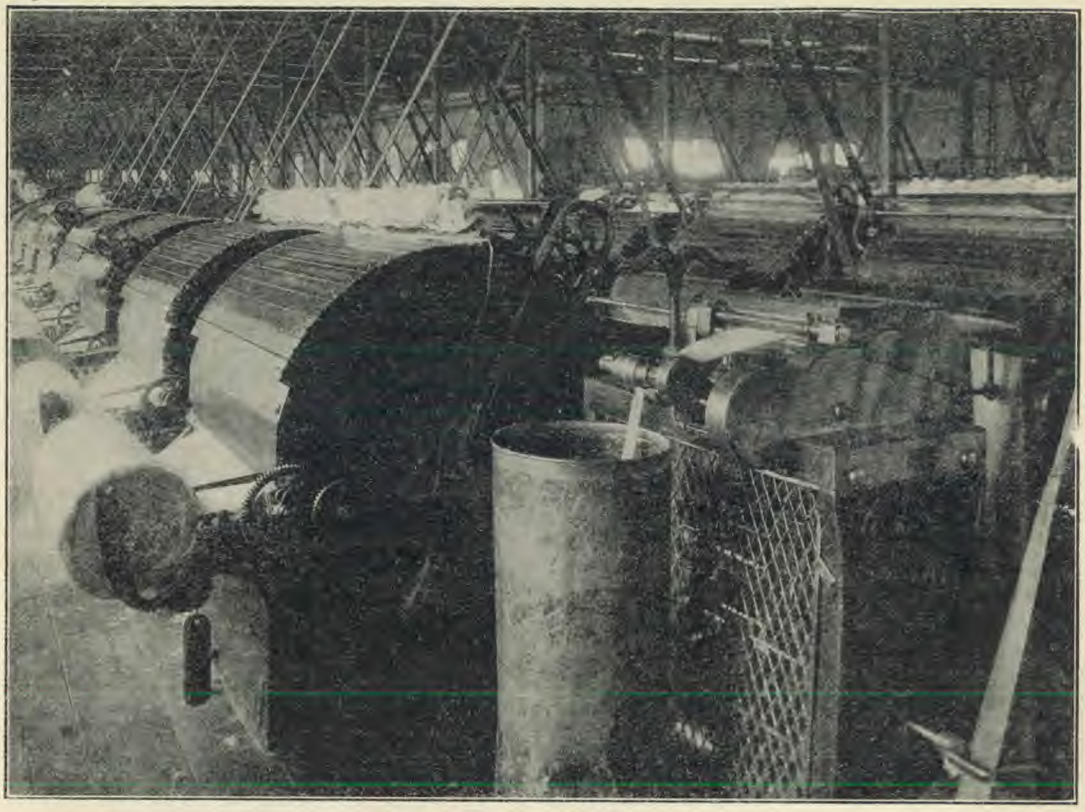
Occupation	Comparative Mortality Figures, All Causes	Phthisis and Diseases of Respiratory System	Phthisis	Diseases of Respiratory System	Diseases of the Circulatory System
Agriculturist	602	221	106	116	83
Potter, Earthenware Manufacturers	1702	1001	333	668	227
Cutler	1516	900	383	578	167
File Maker	1810	825	402	423	204
Glass Maker	1487	740	295	445	157
Copper Worker	1381	700	294	406	186
Gunsmith	1228	649	324	325	153
Iron and Steel Manufacturer	1301	645	195	450	162
Zinc Worker	1198	587	240	347	126
Stone Quarrier	1176	576	269	307	137
Brass Worker	1088	552	279	273	126
Chimney Sweep	1311	551	260*	291	.....
Lead Worker	1783	545	148	397	272
Cotton Manufacturer	1141	540	202	338	152
Copper and Wood Turner	1088	526	250	276	137
Rope Maker	928	486	219	267	118
Bricklayer, Mason	1001	476	225	251	130
Carpet Manufacturer	873	471	226	245	87
Tin Worker	994	451	217	234	124
Wood Manufacturer	991	447	191	256	131
Locksmith	925	428	223	205	104
Blacksmith	914	392	159	233	136
Baker, Confectioner	920	392	185	207	130
Bookbinder	1060	325	.....	218	115
Printer	1096	326	.....	214	133
Musician	1204	322	.....	200	191
Hatter	1109	301	.....	210	141
Hairdresser	1099	276	.....	213	179
Tailor	989	271	.....	195	121
Draper	1014	260	.....	181	135
Shoemaker	920	256	.....	181	121

origin by inclosing the machinery or apparatus in air-tight cases.

There are, however, many processes in which wholly inclosed machinery is impracticable and ineffective; and hence, additional methods must be invoked. Many States have made statutory provision for the removal of dust and fumes, and laid down regulations concerning the construction of workbenches and the applications of different kinds of hoods and hoppers to catch the dust. These hoods are usually made of metal, and are so arranged and applied that the

In the final disposition of dust which has no special value, it is usually made to pass through a tower. For the recovery of valuable constituents, as in the jewelry industry, the dust is collected in suitable tanks specially made for the ultimate recovery of gold or silver.

Successful attempts have been made to precipitate dust and smoke by strong currents of electricity. By such methods, Cottrell demonstrated that 95 to 98 per cent of the cement dust from escaping gases during the roasting processes, can be precipitated and collected.



CARDING-ROOM IN COTTON MILL

This room has an old-style carding machine. The building is old and the hygienic conditions are bad. So much lint escapes as to cause a distinct haziness in the room.

CHECKING THE ESCAPE OF DUST

This may be accomplished in such industries as stone crushing, the mixing of lead pigments, polishing pottery and china when removed from the kiln, clay grinding, etc., by inclosing the entire machinery used in a protecting case, which is opened only when the dust has settled, after the completion of the process. Glass screens may sometimes be employed to shield the workman's eyes and face from flying particles of dust; but flint and steel soon make the glass opaque, and it cannot, therefore, be of much service for protection from the dust of grinding. In some industries, like that of knocking the loose flint from pottery and china, the dusty work may be conducted inside a cabinet into which the workman inserts his hands through a small cloth-covered opening. Another protective method consists in letting heavy dust particles drop in a trough of water. An ingenious method has been devised to protect wool sorters from dust. The wool is sorted upon a fine-meshed wire screen which fits over the entrance to an exhaust duct, so that all the dust is drawn downward and away from the workman, and does not fly about the room at all.

In the early history of foundry work, it was the ordinary custom to hand-clean and brush sand and scale from all casting by means of wire brushes. In this process, large volumes of dust were thrown into the air close to the operator's head where he could not avoid breathing it. This picture of the operator, breathing in a dusty atmosphere with his face and head black with dust as he scratched each single casting by hand, is fast disappearing. The use of the sand blast and the tumbling mills have taken the place of the old process. In the sand blast, coarse sand is forced through tubes with great velocity, directed by an operator, against the casting below. In the floor are openings through which the sand and dust are sucked away by means of fans, causing a suction in pipes leading up to these openings. The operator is protected by means of a helmet or mask, and sometimes by a hose bringing in a supply of fresh air to him.

Between March, 1916, and October, 1917, dus explosions caused the destruction of four of the largest grain and cereal plants in the United States and Canada. In these disasters 24 persons were killed, 38 were injured, and property to the extent of $6,000,000 was damaged. One of these was an explosion and elevator fire in which there was destroyed enough grain to supply bread rations for 200,000 soldiers for a year.

RING SPINNING IN COTTON MILL

The room shown is well ventilated and properly heated, the windows are large, the transoms can be opened, and the walls and ceilings are high and clean.

During the same period of time, a dust explosion occurred in a sugar factory, killing 12 persons, injuring 24 other persons, and destroying almost $1,000,000 worth of foodstuff and property. And such disasters are occurring regularly. Almost any kind of dust containing carbon, explodes under favorable conditions. Among such dusts are grain dusts, flour dusts, sugar dusts, rice dusts, feed dusts, paper dusts, cotton dusts, leather dusts, wood dusts, cork dusts, and fertilizing dusts. Apparently dust and grain handling go hand in hand, but much can be done in the way of safety by keeping the plant clean and as free as possible from accumulations of dust. Records show that six times as many fires occur among dirty mills and elevators as among clean ones.

Sprinkling should precede sweeping wherever the nature of the industry permits. Workshops should be swept daily after sessions of work. The sweeping should be done, where practicable, with damp sawdust, with upper windows open. In certain industries, cleaning and dusting should be done by vacuum cleaner, especially where there is exposure to poisonous dust. All workbenches and tables should be carefully cleaned and wiped with a damp cloth for the removal of fine dust. Feather dusters do not remove, but simply displace dust. In a number of occupations, cement floors with a suitable incline for drainage, so as to facilitate washing with hose, have been found very useful. The application to floors of so-called "dust oil" cannot be approved, since it simply allays dust, but does not remove it, and is, therefore, objectionable in industries where poisonous dust is given off.

Hygiene demands that there should be no accumulation of dust in any part of the premises, and therefore condemns all interior finishes, such as exposed girders, cornices, moldings, cubby-holes, unnecessary shelves, and inaccessible spaces which will serve as dust and germ traps.

The August number of "Life and Health" will be devoted to hot-weather diseases and dangers. It will be ready July 1. Get a copy.

INDUSTRIES and Their Effect on Health

E. B. Carr, M. D.
New England Sanitarium
Melrose, Mass.

INCREASING attention is being given by the State boards of health, in conjunction with the State board of labor and industries, to conditions affecting the health and safety of employees in factories, workshops, and other places of employment. Since the signing of the armistice, much closer study has been directed to the improvement of living conditions, to standardizing the hours of labor, and to making a satisfactory adjustment of wage scales. Congestion of labor, due to the return of army men to civil life, together with a ready propaganda for industrial unrest, has caused a spirit of discontent among the workers, and uneasiness to the employers. It is to the credit of the employers that they have exhibited a spirit of fairness in their willingness to meet with committees from the laboring men. The Boston *American,* March 15, speaking in regard to "get-together meetings," says:

"A get-together program between employers and labor men, which it is believed will prevent unrest among employees and be adopted in other cities, has been agreed upon between the Brockton Shoe Manufacturers' Association and the Joint Shoe Council, central body of the thirteen local unions of the Boot and Shoe Workers' Union, with a membership of 13,000."

Illustrative of the magnitude of New England's industries is the recent estimate that in Massachusetts alone there are more than 50,000 industrial establishments. There are 36 inspectors to look after the work, four of whom are women. In one year, 7,097 orders were issued by the Massachusetts State Board of Labor and Industries. It is interesting to note that 93 per cent of these orders were carried out by the employers, only 7 per cent having to be taken into court. In many instances the order was anticipated.

While for the most part these orders are concerned with minor improvements, and call for only a moderate expenditure, quite often the opposite is true. One order involved extensive changes in an entire plant, and entailed the expenditure of $25,000. Of these orders issued, 6,500 directly affected women and children. Specific orders that have been complied with, have resulted in new inventions, among which the following are the most important:

Dust-removing device placed over stripping cylinders in the card-stripping rooms of cotton mills.

Dust-removing devices in the boot and shoe industry. Patent cans with covers are also used to diminish the odors of naphtha.

Removal of fumes in the art of applying shellac in wood alcohol.

Removal of fumes of cyanide of potassium in jewelry plating.

Respirator for lead workers in the manufacture of storage batteries, and installation of fans to remove hydrogen gas.

Laundries are required to be supplied with effective hoods for removing excessive steam and humidity.

Hood for drawing off gases generated in the process of manufacturing gas mantles

THE TEXTILE INDUSTRY

The textile industry heads the list as to quantity of production. According to the 1909 census the value of textile production was $386,800,000. One of the great problems in connection with this industry is to provide the proper light. The laborers in the cotton and woolen mills are distributed throughout the entire floor space, whereas in the shoe factories, it is possible to place them by benches near the windows, thus obtaining better light. The only exception to this is found in the stitching-room of shoe factories, where the operatives work in all parts of the room. Eyestrain is a common complaint of factory workers. Other conditions, such as proper provision against the entrance of dust into the air of the room, proper means of ventilation, and measures provided to regulate heat and moisture, are being brought up to better standards by the inspectors.

THE BOOT AND SHOE INDUSTRY

This is second only to the textile industry. In a recent investigation of conditions in the factories of Lynn, Mass., I found that in nearly every place, adequate protection had been provided for the operatives in all departments. Some of the processes in the manufacture of boots and shoes give rise to varying amounts of irritating dust. Among the processes that are of special sanitary importance are trimming, shaving, scouring, polishing, finishing, and cleaning parts of the shoe. The kinds of dust generated include leather, lint, fiber, bristles, dried blacking, wax, sand, emery, and carborundum. The foremen of the different departments took pride in showing the completeness of equipment. When asked which were the most common complaints of illness from the workmen, they unanimously answered to the effect that, if the employees carefully followed out the directions given them for their own protection, there could be no complaints due directly to the processes involved in the manufacture of boots and shoes.

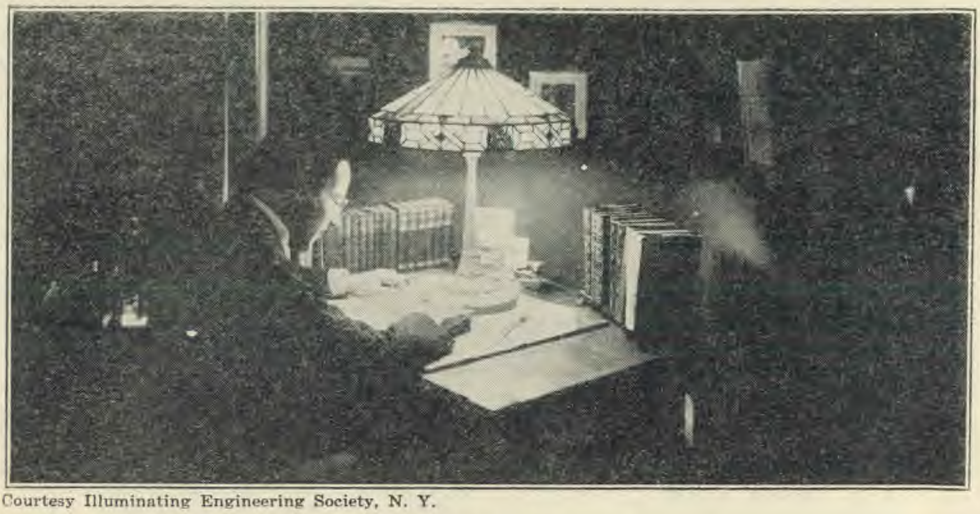
Carelessness on the part of the individual worker is the largest factor in the contraction of disease. It has been observed over and over again that, with the very best machinery, a man will become careless and fail properly to protect himself. Men using the polishing machines, which are well equipped with blowers and hoods, sometimes fail to turn on the power to exhaust the dust. It is evident that this is due to a lack of realization of the harmful effects that will later manifest themselves. The great disease among laborers in the factories where dust is the important item, is tuberculosis. It is difficult by statistics to prove that this dreadful plague is due directly to their work, because of the fact that in most instances the disease does not manifest itself at the time and place of labor.

In this connection the pernicious habit of expectorating on the floors and in the hallways must be emphasized. A worker may be in close contact with his companion who is expectorating innumerable tuberculosis germs. These germs, as soon as the expectoration becomes dry, are carried with the dust of the room into the lungs, and there set up an infection that not only impairs one's health, but at last ends in a lingering death. If proper receptacles for expectorating are not provided, the workingmen should insist that they be forthcoming.

CLERKS, BOOKKEEPERS, AND OFFICE ASSISTANTS

But tuberculosis hits another class of employees more largely than those heretofore mentioned. In "Causes of Death by Occupation," of March, 1917, issued by the United States Department of Labor Bureau of Labor and Industries, it is shown that there exists a larger mortality among those who work at desks indoors. I quote from page 11: "Tuberculosis of the lungs is the most frequent cause of death in fifteen out of nineteen occupations referred to. The proportionate mortality is highest among clerks, bookkeepers, and office assistants, among whom it is responsible for 35 per cent of all deaths at all ages. The disease has its highest excess of proportionate mortality in the age period 25 to 34, when the percentage is 51.2." That means that deaths from all other causes during this age period amount to slightly less than half of those caused by the white plague. The percentage was also high among compositors and printers, gas fitters and steam fitters. It was least represented among coal miners, the percentage being 5.8. It is also low among farmers and farm laborers. This is a significant fact, and I wish to emphasize its importance.

The bulk of evidence here produced, shows that those who work indoors are more subject to disease than those who get outside, and, with good breathing and exercise, give nature an opportunity to manufacture good red blood to combat infective organisms. To the readers of this magazine let me say, If you work in a factory or office, make it a point to have some form of outdoor exercise. One of the very best is obtained by working in a garden. Physical contact with the soil under the actinic rays of the sun, is a most certain preventive of disease and restorer of health. There is the added inspiration of watching the flowers or vegetables grow, and that varies the monotony of the daily routine of the office, bench, or machine. If you have to rent the ground, work it with the idea of making it pay, and have the satisfaction of being an independent producer, rather than a mechanical part of a corporation machine. Try it. The weariness of imagined, if not actual drudgery, will vanish, and the days will be filled with good cheer and the expectancy of brighter days to come.



Courtesy Illuminating Engineering Society, N. Y.

A Bad Reading Position

LIGHT *and* HEALTH

J. A. Pines, M. D.

New England Sanitarium, Melrose, Mass.

IN looking back through the past decade, we see very clearly that more and more attention is being paid to the matter of efficiency in all lines of industrial work. For some time many plants have been employing an efficiency engineer whose sole duty is to increase production, at the same time decreasing the cost of operation.

Until recently the attention of this engineer was concentrated upon machinery and apparatus. The health and comfort of the employees were not considered from an economic standpoint.

Since the beginning of the World War many of our factories have been running day and night, and the problem of illumination has been brought to the attention of those in charge by its effect upon the health of the employees as well as the quality and quantity of the output of the plant.

In the large factories of New England millions of dollars have been expended in the past for artificial illumination with relatively little knowledge as to what result would be obtained. Much of this has been wasted in poor lighting. The illumination in some factories has been not only bad in itself, but positively harmful.

Many of the largest and best-equipped plants in the country considered the open-flame gas burner or bare lamps hanging on drop cords adequate for all practical purposes, ignoring the three important considerations of any lighting system,— sufficiency, continuity, and diffusion.

EFFICIENT ILLUMINATION

Sufficient illumination should be provided for each workman irrespective of his position on the working space. Daylight is of course the ideal light, and should be utilized to the best possible advantage. When artificial illumination is necessary, it should resemble daylight as nearly as possible. Adequate artificial illumination should be provided from overhead lamps, so that sharp shadows may be prevented as much as possible. In addition, individual lamps should be placed close to the work if they are necessary, and in such cases the lamps should be provided with suitable reflectors.

To insure a satisfactory intensity of light on the work from a general overhead system of lighting, it is in most cases essential to provide light from several directions so that all sides of the work may be properly illuminated. Where general illumination is properly designed, predominance of light from any direction is not sufficient to cause serious shadows.

The intensity or strength of illumination should bear a close relation to its seeing value as well as its cost. In order to secure economy it is the practice to furnish as low an intensity as will enable the processes to be carried on efficiently. Flickering and unreliable lights are especially bad. This is found in some factories which make their own current or use the open gas flame, the lights being bright for a few minutes and then dim, flickering and changing constantly. This not only causes inconvenience

and poor workmanship, but is injurious to the sight of the workmen. The attempt of the eye to adjust itself to the changing light keeps the iris expanding and contracting, which fatigues the muscles of accommodation, causing a constant irritation to the sensitive retina, with much discomfort and pain and frequently serious damage to the sight.

Illumination engineers class lighting under two heads, general and localized. While no system equal to daylight has yet been perfected, general overhead illumination more nearly approaches this than any other. When installing a lighting system, many things should be considered, especially the height of ceiling, color of walls, and class of work to be done.

Courtesy General Electric Company

General Illumination by the Semi-indirect Method

The purpose of the light is to enable the workmen to carry on their work quickly and accurately, without danger of accident to themselves or others or to the machinery or product. The arc light, which is a high-powered unit, is especially adapted for large, high, open workrooms. For low rooms with white ceilings, the indirect light is more practical. The diffusion is good, the glare absent, and the distribution of light quite even.

Tungsten filament incandescent lamps, mercury vapor lamps, and glower lamps all have their place in general illumination.

In addition to supplying the necessary light on the work, general illumination also provides ample light on floor space and adjacent objects, thereby lessening the liability to accidents. Localized lighting is the simplest method of supplying artificial light, and is placed under the control of the workman. Such a unit is capable of lighting but a small area, and its application depends upon the judgment of the workman, and is employed only where general illumination is impossible, as, for example, the interior of boilers and beneath machinery, except when used to supplement general illumination where delicate or intricate work is to be performed, as sewing, watchmaking, etc.

Many workmen have a tendency to judge a light by its brightness rather than by its useful illumination. The misuse of localized lighting is one of the most serious objections to its use, not only entailing an unnecessarily high cost of light, but distracting the workman's attention without affording him a suitable working illumination. He is prone to use a light of the highest candlepower that can be secured, discarding all reflectors and shades and placing the light close to his work and within his line of vision. The glare from such a light interferes with his seeing and is tiring to his eyes.

Localized lamps should be equipped with suitable opaque reflectors which not only strengthen the light on the work but also cut off the glare from the eyes of the workman. Each lamp should be so located that the eye does not see

it in the ordinary course of work, and so shaded that brilliant reflections are avoided. Bare lamps shining directly into the eyes should seldom if ever be used, as the eyes are constantly strained in making the effort of adjustment. A combination of general and localized illumination is now being used more than any other arrangement.

When adequate and satisfactory illumination is substituted for poor illumination in factories, the results obtained are mutually beneficial to employees, employers, and the country as a whole. The health, contentment, safety, and skill of the employees are maintained at a high standard, the output is increased in quantity and improved in quality, and there is a proportional reduction in the cost of the finished product when it is ready for market.

The advantage of good light, both natural and artificial, and of bright and cheerful interior surroundings in mills and factories, is of the greatest importance. In visiting many of the factories of New England I found most of them quite scientifically equipped with lighting system, although in some of the best of them I found employees who, either through ignorance or carelessness, were disregarding the advantages furnished them.

Much has been done and a great deal yet remains to be accomplished along these lines, both in improving illumination and in educating the employees to its use.

Courtesy Illuminating Engineering Society, N. Y.

A Good Reading Position

God's first claim to man is by right of creation, and the ownership is complete, body and soul.

Man belongs to God by right of redemption, and the purchase, by the blood of his own Son, includes the body.

As an adopted member into God's family, the Christian belongs to God wholly, body, soul, and spirit.

Self-mastery is the greatest conquest that any individual can gain.

Some people ask God to work a miracle of healing, while they neglect the simplest work for healing which he asks them to do.

When God said, "Let there be light," he made all we need or can use. It is for us to let it in. The same may be said of fresh air.

Both ends of a hoe are good, one for cultivating garden stuff and the other for cultivating health. Even with a failure of crops there is something to the good.

THE GRIND OF INDUSTRY

G. H. Heald, M. D.

THERE are a number of activities working earnestly, though possibly not always wisely, for the uplift of the laboring class. There are the unions themselves, and the National Federation of Labor, endeavoring to obtain higher wages, shorter hours, and better working conditions. There is the Government Department of Labor, acting in various ways to secure an improvement in working and housing conditions. There is the Public Health Service, accomplishing much for the improvement of sanitation in connection with industry.

In the first place, there is too often a mutual distrust between "capital" and "labor,"— between the employers and the employed,— embodied in a feeling that they are and must be mutually antagonistic, that one cannot prosper except at the expense of the other. The laborer is liable to think that if capitalists could be done away with entirely, and the property divided equally among the poor, times would be much better. The employer, on the other hand, — at least in the past,— has been prone to think that the more work he could screw out of

Do industrial workers suffer in health because of their work?

Is there something in the very nature of work that drags out the life of the worker?

What is meant by industrial fatigue, and to what extent is it preventable?

These are most important questions.

The welfare of this country depends upon the welfare of the worker.

The welfare of the worker depends upon the welfare of the country.

Bolshevism and anarchy spell ruin, not only for the country, but for the workers themselves, including the Bolsheviki. Prosperity cannot come from the destruction of the property and the brain and energy that have built up our national wealth.

Industrial unrest in these firebrand times is the tinder which a spark from Bolshevism may light at any time.

One of the most important questions before us, not even a second in importance to world peace, one demanding the keenest attention of legislators and all concerned, is, "What can be done to improve the condition of the workers and prevent industrial unrest?"

Then there are the great industrial plants themselves, many of which have through various forms of welfare work attempted to ameliorate the condition of the workers. This has not been primarily or entirely from a motive of benevolence, but because industrial leaders are coming to see that industry cannot prosper to the full extent while the employees are living and working under unfavorable conditions. As one plant makes a success of this welfare work, others take it up, and so the work is spreading. New plants are being built with the most modern sanitary conveniences, restrooms, etc., and often with near-by sanitary suburban homes for the workers. Old plants are being remodeled in conformity with the growing conviction that the greatest prosperity can come only when the workers are well cared for and contented.

But notwithstanding all these measures for amelioration, there is unquestionably something still wrong with labor conditions. There is a chronic condition of injustice crying for remedy. his men for a minimum of wages, the more he would prosper.

So far as employers are concerned, this attitude is fast being superseded. Industrial plants the country over are learning that a contented, prosperous, well-paid body of laborers costs less than a discontented body with large labor output and frequent strikes. They have learned that every contented employee with good health, a good home, and a happy family is an asset to the factory, while the discontented man, even though on a much smaller wage, is a liability.

For this reason efficiency engineers plan for restrooms, rest periods, lunchrooms, recreation grounds, medical supervision, proper housing, and the like. And this is only a beginning. Some day the employer and the employee will understand each other better, and each will see that the other's welfare is his welfare.

Now as to the individual worker. What is there in his attitude to his work that may injure his health and lessen his usefulness and

probably his salary? In the first place, it should be understood that there is in a factory, as there is in an army, a morale that makes for or against the efficiency of the body as a whole. This morale is improved by everything that increases the confidence between employer and employee. It is lessened by all suspicion, unrest, by unfavorable working conditions, by bad hygiene in the home, and by the saloon habit.

The fact that these things are pretty well understood by progressive employers, explains why these men are so forward to go to great expense for the comfort and health of their employees. But aside from the general morale, each laborer has his own personal morale. If he thinks the "boss has it in for him," is promoting others and passing by him, he is in a fair way to do inferior work and remain in his poorly paid position.

If he is not interested in the success of his work and does it mechanically, not only will he do inferior work and get inferior pay, but he will tire more easily, and be the first to go on the sick list. There is no tonic like work which one thoroughly enjoys, and there is nothing so depressing as to do work in which one has no interest. Drudgery drags the life out of one. For his own interest, then, the laborer must learn to take interest in his work. The more he thinks of making good and the less he thinks of his small pay, the more likely he is to do work that will bring increased pay.

The writer of this article has not a cent invested in any manufacturing or other concern, and depends on his daily wages for his living. He has nothing to gain from the prosperity of the employers' class, except as all working men prosper. He knows from long observation that the workman is at his best when there is the best understanding between employer and employee.

YOUNG WAGE-EARNERS

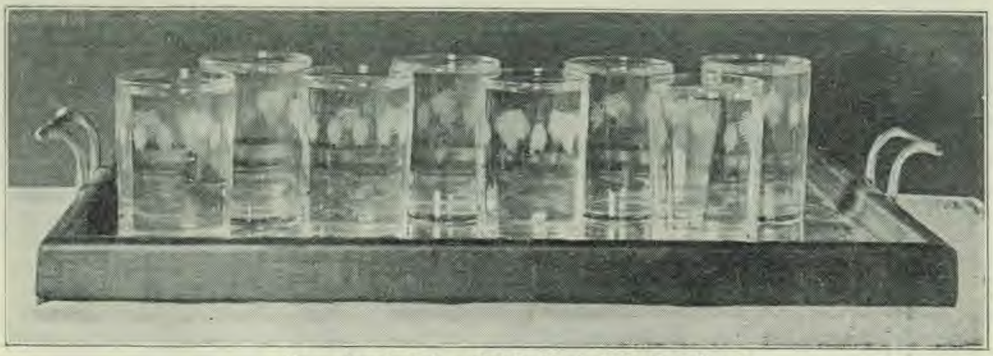
One of the great evils of the modern factory is child labor. It is an evil difficult to remedy, because parents favor it, feeling that they need what the children earn, to help support the family. Factory owners believe in it, for they thus get several wage-earners from a family for the wages they should pay to one or at most two.

To sum up, then, there are certain causes for unrest:

Some shortsighted, selfish employees.
A more or less extended feeling of suspicion between employer and employee.
A feeling on the part of each that the prosperity of the one must be accomplished at the expense of the other.

There are certain cures for unrest:

Cultivation of the get-together spirit.
Increase of welfare work by employers.
Cultivation in each shop of a spirit of loyalty and interest in the work.



For a Day in July — Not So Much, Only Two Quarts

HEALTH HINTS FOR JULY

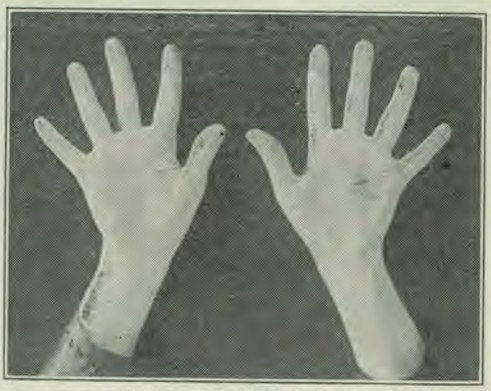
L. A. Hansen

THIS is one month, there are eleven others, in which the drinking of plenty of water is in place. In hot-weather months more water is needed because of the increased perspiration. Eight glasses of water a day would be a good average amount at this time of year.

Putting coffee or tea in water does not improve the water or make it one bit better for quenching thirst. In fact, coffee and tea are not foods; they are stimulants, and as such give no real strength. Almost everybody grants that they are bad for children. No one can tell why they should be any better for grown people; they are not.

Another thing to remember about water drinking is that it is not to be done while eating, so that the food is washed down without proper chewing.

Look out for typhoid fever. You don't "catch" it; you swallow it. Typhoid germs cause the disease when they are taken into the human body. Food and drink are some of the means by which the germs enter the body. Milk that has become contaminated by typhoid fever germs — perhaps by washing milk cans with water containing the germs, or by being handled by some one who has been caring for a typhoid fever case — is a very active medium for conveying the disease.



Always wash them before eating.

The hot weather of summer months is favorable to the spread of typhoid fever, as well as various diseases, especially bowel troubles. Disease germs thrive at this time, and the heated term tends to lower physical vitality, thus making the body more susceptible to disease. Hence, the greater need, if there is at any time a greater need, of giving more careful attention to hygiene and right living.

A fly is bound to crawl upon the food we eat.

Don't forget that the fly is another enemy of health, particularly dangerous in hot weather. A single fly may bring millions of germs, many of which may be disease producing, directly to your mouth or to the food.

The fingers may be a very direct means of conveying disease germs to the mouth and thus into the body, where they will multiply. Therefore the hands should be washed before meals.

Summer time is fruit time and plenty of fresh fruit should be eaten. The fruit juices are much needed by the human system, affording food elements particularly demanded in hot weather. But fruit exposed to dust and dirt should not be eaten without washing or careful wiping.

Flesh foods are not the best foods at any time of the year; they are particularly undesirable in hot weather. Their tendency to spoil is increased with warm weather. This is especially so of fish. The possibility of creating unwholesome conditions within the body are increased accordingly.

The increased perspiration in hot weather means more body poisons coming to the surface of the body, hence the need of more bathing. Water inside and on the outside is a natural cleanser. The fine tonic effect of bathing is also especially valuable in hot weather.

If you have not learned to sleep with plenty of fresh air in your room, now is a good time to get used to it. Open your windows wide, every night, during July. Then keep it up the rest of the year and so on to next July. Maybe you are fortunate enough to have a sleeping porch; then so much the better.

Light, porous clothing is the proper kind for summer wear. Let no part of the clothing be tight enough to restrict the blood circulation at any part. This applies to shoes, garters, trouser bands, belts, arm bands, collars, and hats. The circulatory system operates normally only when unrestricted, and a free circulation is absolutely necessary to health. Make a complete change of clothing every night.

RELIEF FOR NEURALGIA

G. H. Heald, M. D.

WHY take a heart-depressant tablet for the relief of neuralgia pain when there is at hand a physical remedy which has an efficacy often marvelous and which is followed by no undesirable results?

Ordinarily we think of heat for pain — a fomentation locally applied. If you suffer from neuralgia, have you tried the Australian remedy so called? Not heat, but cold; not locally to the pain, but up and down the spine. If you have been a skeptic regarding the efficacy of the "cold water cure," perhaps an experience with this treatment will be an eye opener.

If the writer had something to sell, some patent appliance or remedy, you would readily understand his confidence. One is always enthusiastic regarding the virtues of what he has to sell — and, as the sequel too often shows, his enthusiasm is not warranted by the actual merits of the article he is exploiting. The writer has nothing to sell, nothing to gain from the promulgation of this relief for neuralgia. And for that very reason and because the remedy seems so simple and costs nothing, it may by some sufferers be considered of little value.

The present article is written because of some remarkable experiences with the remedy, sometimes in intercostal neuralgia (between the ribs), sometimes in brachial neuralgia (down the arm), sometimes in facial neuralgia. A very brief treatment has greatly mitigated or entirely relieved an agonizing pain.

The treatment is simple enough. The patient with back bared lies face down on the bed or couch. An attendant takes a towel folded lengthwise, so as to make a compress about four inches wide and the length of the towel. This is lightly wrung out of very cold water, — the colder the better,— and laid the full length of the spine up to the hair. The patient of course is protected by a sheet or other covering. The cold compress should be left on until it is comfortable, and then followed by a second similar application, after which the back should be rubbed dry.

If, after some hours, the pain returns, the application may be repeated. Sometimes a treatment of this kind gives permanent relief.

POINTED PARAGRAPHS

IT is not so funny as it seems to make a baby laugh by teasing it.

Raising strong healthy children is fully as important as raising fine live stock — and more too.

If the child is to be educated in health principles, the mother must first know them.

The cow makes a pretty good foster mother to the child, but she is not nearly so good as the real.

Baby bottles with long rubber tubes were out of date some time ago; if you must use the bottle, use the right kind.

"Let a little sunshine in" goes well as a song. In practice it is still better.

Speaking of sewer systems and the importance of keeping them open,— how about your own? That is the most important sanitary question as far as you are concerned.

Don't take chances with the "flu." If you do, the chances are it will take you.

Taking chances on anything is liable sooner or later to catch one, for the law of chance strikes its average, and you don't know where it will hit.

Some of the highest-value health essentials cost the least,— exercise, sunshine, and fresh air, for example.

The average of human life is being lengthened by saving the babies. Good. But why not save at the other end too?

The spice of life is not the kind that comes in pepper boxes and cruets. Spice is better put into the living than anywhere else.

The farther this side of the grave we begin our health training, the farther will it be to the grave. Health education is worth nothing to the man who is dead.

There are some things we should keep to ourselves,— colds for instance. Don't pass yours on just because somebody else gave it to you.

If it is "only a cold," it is bad enough; for that may kill you before you are through with it.

If you let your premises remain insanitary because your neighbor does, you are simply doubling the danger to both of you.

Do we stop to think that overeating is a form of drunkenness?

Don't expect grace at the table to take the place of good work in the kitchen; God can do his part in blessing when you have done your part in cooking.

With God doing everything possible to give us health and happiness and we doing almost everything to bring disease and misery, it looks bad for us to charge Providence with the results of our own doings.

L. A. H.

RECIPES AND FOOD VALUES

George E. Cornforth

CHILI CON CARNE

1 pint cooked Lima beans or kidney beans, without liquid.
1 pint soy bean meat, cut into strips 1 inch long and 1-4 inch wide and toasted.
2 onions, chopped and cooked in —
2 tablespoons oil.
1 pint tomatoes.
1 teaspoon salt.
1-2 teaspoon paprika.
1-2 of a canned sweet pepper, cut into shreds.

Heat all together in a double boiler. Serve with a border of boiled rice or mashed potato.

The recipe for the soy bean meat was given in the June number of LIFE AND HEALTH.

CORN PONE

2 cups Southern, or white, cornmeal.
3-4 level teaspoon salt.
1 tablespoon hard vegetable fat.
Cold water.

Mix the cornmeal to a soft mush with cold water, adding the salt and fat. Make the mixture just thick enough to keep its shape. Put onto a hot pan in egg-shaped cakes with a spoon, and bake.

The following is given in answer to a request for a recipe for

CARROT PIE

Line a pie tin with pie paste, building up a scalloped edge.

For the filling use the following:

1 3-4 cups cooked carrot, mashed very fine or rubbed through a strainer.
2 level tablespoons fine cracker crumbs.
1-3 cup sugar.
1 tablespoon molasses.
1-2 level teaspoon salt.
2 cups milk, heated.
1 egg, beaten.
1-4 level teaspoon mace.

Mix the ingredients well together. Pour into the crust and bake in a slow oven till set.

When we were asked by the Government to conserve sugar, we made a change in our pumpkin pie recipe and found that we had a nicer-tasting pie. Our patrons have called this the best pumpkin pie they ever ate.

PUMPKIN PIE

Line a pie tin with pie paste, building up a scalloped edge.

Filling:

1 1-2 cups milk, heated.
1 1-2 cups dry cooked pumpkin, rubbed through a strainer.
Scant 1-3 cup sugar.
Scant 1-3 cup corn sirup.
1-4 level teaspoon salt.
1 egg, beaten.
1-4 cup fine cracker crumbs.
1 tablespoon oil.
1-4 cup molasses.
1-4 level teaspoon cinnamon.

Mix the ingredients well together. Pour into the crust and bake in a slow oven till set.

Here is a recipe for buckwheat cakes that will be found superior to the ordinary buckwheat cakes, and they are not open to the objections from the standpoint of wholesomeness that may be made to the usual buckwheat cakes.

BUCKWHEAT CAKES

3-4 cup fine crumbs of thoroughly dried bread.
1-3 cup buckwheat flour.
1-4 teaspoon salt.
About 1 1-2 cups milk.
1 egg.

Mix the crumbs, flour, and salt. Heat the milk, not to boiling, but somewhat hotter than the hand can bear. Pour enough of the hot milk over the crumbs to make a rather stiff pour batter. Separate the white from the yolk of the egg. Stir the yolk into the crumb mixture. Beat the white stiff, and fold it into the mixture last. Cook on a hot, slightly oiled griddle, till browned on one side, then turn and brown the other side.

The nutritive value of the ice cream depends upon how it is made. The figures given may be about the average. Possibly they may be a little higher than much ice cream that is sold at soda fountains. Ice cream equal in nutritive value to the figures given contains the following ingredients:

ICE CREAM

2 cups heavy cream (40 per cent).
3 cups milk.
1 1-4 cups sugar.
1 level tablespoon ice-cream powder.
1 1-2 teaspoons vanilla.

Absolute accuracy is not claimed for the figures given in the accompanying table. The weights assigned to the measures given are the result of a limited number of experiments, but it is believed that they are sufficiently accurate for practical purposes. We give the following in answer to a call for a table of food values:

	CALORIES IN ONE OUNCE				AN ORDINARY SERVING		
	Protein	Fat	Carbohy.	Total	Measure	Ounces	Calories
Cooked rolled oats	2.7	2.8	11.5	17.	¾ cup	6	103.
Cooked whole wheat	1.1	.9	17.5	21.	¾ cup	6	126.
Cornmeal mush	1.1	1.5	10.1	12.7	¾ cup	6	76.2
Cooked rice	2.0	.02	20.4	22.42	¾ cup	6	134.4
White bread	10.7	3.4	61.6	75.7	1¼ oz. slice [1]	1¼	94.6

	CALORIES IN ONE OUNCE				AN ORDINARY SERVING		
	Protein	Fat	Carbohy.	Total	Measure	Ounces	Calories
Graham bread	10.3	4.8	60.4	75.5	1¼ oz. slice [1]	1¼	94.4
Baked beans	6.3	5.1	17.1	28.5	½ cup	4	114.0
Baked soy beans	13.2	21.3	13.0	47.5	½ cup	4	190.0
Cooked dried Lima beans	5.3	6.5	19.1	30.9	½ cup	4	123.6
Peanuts baked like beans	12.9	44.4	12.3	69.6	½ cup	4	278.4
Brazil nut meats	19.7	176.4	8.1	204.2	3 nuts	½	102.11
Pecan nut meats	12.8	188.0	15.4	216.2	8 nuts	½	108.1
Almond meats	24.4	144.9	20.1	189.4	14 nuts	½	94.7
Walnut meats	21.3	170.0	15.1	206.4	3 nuts	½	103.2
Pine nut meats	39.3	130.4	8.0	177.7	1 round tablespoon	½	88.8
Peanut butter	34.0	122.8	19.8	176.6	1 level tablespoon	½	88.3
Corn flakes	10.8	1.4	91.6	103.5	1 cup	¾	77.6
Shredded wheat	12.8	4.5	87.6	104.9	1 biscuit	1	104.9
Eggs	16.2	31.7	.....	47.9	1 egg	..	79.5
Milk	3.8	10.6	5.8	20.2	1 glass [2]	8	161.6
Thin cream (18 per cent)	2.9	48.9	5.2	57.0	½ cup	4	228.0
Granulated sugar	.0	.0	116.3	116.3	1 level tablespoon	⅛	38.8
Molasses	2.8	.0	80.4	83.2	1 cup	12	998.4
Cottage cheese	24.2	2.6	5.0	31.8	⅓ cup	3	95.4
Ice cream	2.5	33.7	25.7	61.9	½ cup	3	185.7
Dairy butter	1.2	224.4	0.	225.6	1 level tablespoon	½	112.8
Olive oil	0.	264.1	.0.	264.1	1 level tablespoon	½	132.1
Potatoes	2.6	.3	21.3	24.2	1 medium	5	112.8
Sweet potatoes	2.1	1.8	31.8	35.7	1 medium	5	178.5
Green peas	7.8	9.0	16.9	33.7	½ cup	4	134.8
Spinach	2.4	.8	3.7	6.9	½ cup	4	27.6
Fresh tomatoes	1.0	1.1	4.5	6.6	1 medium	4	26.4
Lettuce	1.4	.8	3.4	5.6	4 average leaves	1	5.6
Celery	1.3	.3	3.8	5.4	3 sticks	2	10.8
String beans	9.0	2.9	2.2	6.0	½ cup	4	24.0
Radishes	1.5	.3	6.7	8.5	4 radishes	1½	12.8
Cooked beats, sliced	2.7	.3	8.6	11.6	½ cup	4	46.4
Canned corn	3.2	3.2	22.0	28.4	½ cup	4	113.6
Cooked green Lima beans	4.6	.8	16.9	22.3	½ cup	4	89.2
Cooked squash	1.0	1.3	12.2	14.5	½ cup	4	58.0
Ripe olives, as purchased	1.6	55.4	4.1	61.1	6 olives	1	61.1
Apples, as purchased	.3	.8	12.5	13.6	1 medium	6	81.6
Apples, edible portion	.5	1.3	16.5	18.3	..	..	.....
Bananas, as purchased	.9	1.1	16.6	18.6	1 medium	4	74.4
Bananas, edible part	1.5	1.6	25.7	28.6	..	..	.....
Blueberries, raw	.7	1.6	19.2	21.5	½ cup	3	64.5
Grapes, as purchased	1.2	3.2	16.7	21.1	1 small bunch	5	105.5
Grapes, edible part	1.5	4.2	22.3	28.0	..	..	.....
Grape juice	.0	.0	23.8	23.8	1 glass [2]	8	190.4
Peaches, as purchased	.6	.3	8.9	9.8	1 medium	4	39.2
Peaches, edible part	.8	.3	10.9	12.0	..	..	.....
Plums, as purchased	1.0	.0	22.2	23.2	2 plums	4	92.8
Plums, edible part	1.2	.0	23.3	24.5	..	..	.....
Prunes, cooked	.6	.3	25.8	26.7	5 prunes	3	80.1
Apricots, as purchased	1.1	.0	14.6	15.7	1 apricot	3	47.1
Apricots, edible part	1.3	.0	15.5	16.8	..	..	.....
Dates, as purchased	2.2	6.6	81.9	90.7	4 dates	1	90.7
Dates, edible part	2.4	7.4	91.0	100.8	..	..	.....
Dried figs	5.0	.8	86.1	91.9	2 figs	1½	147.8
Raisins	3.0	8.7	88.3	100.0	¼ cup	1	100.0
Blackberries	1.5	2.6	12.7	16.8	½ cup	3	50.4
Grapefruit, edible part	.9	.5	11.8	13.2	½ medium (pulp)	3½	46.2
Muskmelons, edible part	.7	.0	10.8	11.5	..	6	69.0
Watermelon, edible part	.5	.5	7.8	8.8	..	8	70.4
Oranges, edible part	.9	.5	13.5	14.9	1 medium (pulp)	5	74.5
Lemon juice	.....	.....	11.4	11.4	¼ cup	2	22.8
Pears	.7	1.3	16.4	18.4	1 medium	4	73.6
Raspberries, red	1.2	.0	14.6	15.8	½ cup	3	47.4
Raspberries, black	2.0	2.6	14.6	19.2	½ cup	3	57.6
Strawberries	1.2	1.6	8.5	11.3	⅔ cup	4	45.2

[1] A slice 4 x 4 x ½ inches.

[2] As usually served, one-half inch from top.

The prunes are the size of which it takes 40 to 50 to make a pound.

The grapefruit are the size of which there are 80 in a case. An average half of such a grapefruit weighs 6 ounces. The edible portion of such a half weighs 3½ ounces.

AS WE SEE IT

Conducted by G. H. Heald, M. D.

FRENZIED FIRING AND WHOLESALE HIRING

THE labor turnover — that is, the constant change caused by discharging men or by their quitting, and hiring others — costs the industries of this country the vast sum of a billion and a quarter dollars ($1,250,000,000) a year, so we are informed in a leaflet recently issued by the United States Department of Labor. This leaflet, "Labor Turnover and Industrial Training," explains why our present enormous labor turnover is expensive to both employer and employee, and why it raises the cost of living for the "ultimate consumer."

According to careful study of the subject in one big manufacturing plant, it was found that in ninety per cent of the cases of discharge and quittance the fault was with the plant itself — failure to give proper training or to place the man where he would work to the best advantage.

The special point which the bulletin makes in this connection is that industrial training conducted in the plant results in the worker's being better fitted for his job. Hence he earns better wages, produces more for his employer, has a greater sense of self-respect, and remains at his task instead of periodically shifting from job to job.

The United States Training Service is devoting special attention to preparing courses in the proper methods of training in various industries so that interested manufacturers may be supplied with adequate material for operating training departments. In addition to the bulletin mentioned here, the Training Service has issued several other pamphlets on training which will be mailed to any one addressing the Service, care of the Department of Labor, Washington, D. C.

EAT FREELY OF GREEN FOODS

IN the January, 1919, *Journal of Biological Chemistry* is an article by Osborne and Mendel on "The Vitamines in Green Foods." They describe a series of feeding experiments showing the effect on nutrition and growth of various food combinations, the object being especially to determine to what extent the green foods contain the vitamines which stimulate growth. In their concluding paragraph they say:

> "If one may draw conclusions from the limited data now available, it seems that the green vegetables supply an important addition to the diet of man because the staples, such as cereals, meats, potatoes, fats, and sugar, probably furnish too small an amount of either of these vitamines to meet fully the requirements of an adequate dietary. Therefore care should be taken not to reduce greatly the quantity of green vegetables customarily eaten, until more is learned about the actual requirements for these food factors and their relative abundance in the commonly used vegetables and green foods. Only then will it be safe to apply the results obtained in the laboratory to attempt to effect economies in the use of these relatively expensive food products."

In the previous paragraph they had stated that "the striking feature of these experiments is the small amount of these plants needed to supply inefficient fat soluble vitamine for long-continued and vigorous growth." Experiments are now in progress to determine to what extent the quantity of green

food can be reduced and still normal growth continue. Pending the results of these experiments it is well to take their advice, and use freely of the green vegetables — unless the food contains an adequate supply of milk, eggs, etc.

AFTER PROHIBITION — WHAT? A PROPHECY

PROBABLY never too strong a friend of prohibition, the *Medical Record*, in its issue of February 22, has made an editorial prediction of what will result when prohibition is in full force. The gist of the editor's prediction is that some heavy drinkers will be driven to the use of some " dope " which may or may not be worse than the alcohol, according to the comparative amounts of the alcohol and of the new drug taken. Moderate drinkers who drink " voluntarily," he believes will be satisfied with some light beverage or " soft " drink containing no stimulants. He is certain, however, that those who are driven to use considerable quantities of the caffeine drinks will be distinctly worse off than when they were using alcoholic drinks. An interesting paragraph has reference to what the prohibition workers will do when their fight for the prohibition of liquor is over. He says:

> " When prohibition becomes an established fact, the pretense that the consumption of light wines and beer in even the most moderate amounts is physically injurious will no doubt be dropped, and a new crusade will be started against some other habit — probably smoking. And then there will not be wanting well-meaning but irrational medical men, unable to see the difference between the use and abuse and deducing from exceptions the rule, who will declaim against the evils of tobacco; and maybe at some future business meeting of our national medical society a resolution will be passed regarding the injuriousness of the cigarette, and this will be published as the deliberate scientific judgment of the greatest body of physicians in America. Then after many days the pendulum will swing back again."

Yes, brother, the next fight will be against tobacco, and sooner or later it will follow John Barleycorn down the gangplank. But I question whether the pendulum will swing the other way again.

ILLUSTRATION OF HOW NEW DISEASES START

IN the *Scientific American* of March 15, is an article on " Ticks as Carriers of Animal Disease," by W. H. Ballou, Sc. D., which gives in a brief one reason why occasionally a " new disease " breaks out in a country or a community, and perhaps assumes alarming proportions. Dr. Ballou says:

> " Suppose half a dozen Zulus from South Africa were transported and immediately set down in a crowded New York theater. Close contact would surely result in those Zulus giving off the disease to which they are immune at home, and infecting some or all of the crowd of strangers to which they were introduced. The Zulus in turn might be infected by the germs carried by New Yorkers to which the New Yorkers were immune. Neither of the parties to this meeting would have defenses against the diseases of the other."

Then he goes on to tell how this principle was exemplified in the zoological garden at the Bronx. Later on Dr. Ballou says:

> " Many types of snakes carry malarial germs, but are immune from malaria. When, however, they come in contact with snakes without such immunity, the disease takes hold of the nonimmunes."

Many animal species and races of the human family, by generations of contact with certain micro-organisms, become relatively immune to these organisms, which are carried around as harmless germs; but these germs coming

in contact with another race which has not been immunized, may produce a violent epidemic.

Some healthy people carry influenza germs and pneumonia germs indistinguishable from those which cause disease in others. In Mexico there is a relative immunity against smallpox, which is a mild children's disease that nearly everybody gets, and against which they do not think it worth while to vaccinate. But a nonimmune coming in contact with this supposedly mild smallpox, may have it in a severe form. The children's diseases, especially measles, though comparatively mild with us whites who have been in contact with it for generations, came near wiping out the natives in some of the Pacific Islands, to whom it was a new disease.

From this it will be understood that susceptibility and immunity are relative terms. Each race, and in fact, each of us, is relatively immune to certain germs with which we and our ancestors have been fighting for generations, so that our resistance powers against these particular germs have been built up to a relatively high degree; but to other germs, with which we and our ancestors have not had much dealings, we are relatively susceptible.

The Negroes are particularly susceptible to tuberculosis, and many of them die of it, but they are relatively immune to malaria and hookworm disease. The Jew, on account of his method of living, often contracts tuberculosis, but his centuries of ghetto life and exposure to tuberculosis have developed such a high resistance against this disease that he nearly always dies of something else — rarely of tuberculosis.

When we have an epidemic of some new disease, it is probably some old disease that for ages has been struggling with man or some species of animal, in some part of the earth, and that has recently been imported to the country by some "carrier," man or animal, that may or may not have had the disease.

The idea that by some sort of living, one may render himself absolutely immune to the attacks of any and all micro-organisms, would appear to be without foundation. Some of the most godly and conscientious people, living up to all the light they had in healthful living, have yielded their lives in the missionary fields through contact with some organism against which they had developed no immunity.

HYPNOTISM ADMITTED TO BE A DISEASE

In an editorial article, "Hypnotism Then and Now," in the *New York Medical Journal* of March 22, there occurs the following significant statement:

> "When we recall that thirty years ago hypnotism was looked upon as a very wonderful psychological phenomenon, which not only deserved to be studied, but above all promised to reward investigation by furnishing the key to a great many psychic processes and to mental activity generally, it is rather interesting to have it now set down as an induced hysteria. Physicians who know what a diabolically intricate thing hysteria can be, how puzzling and yet how simple, how full of the unexpected and yet how eminently amenable to suggestion, will realize something of the change that has come in medical scientific opinion before hypnotism could be thus defined."

One of the authorities on nervous infections during the war made the suggestion, after a study of shell shock (a form of hysteria), that the use of hypnotism for the cure of shell shock was contraindicated because hypnotism was hysteria artificially induced, and could not act as a cure for hysteria.

But this is no news. Specialists in the study of hysteria have long known that hysteria, double consciousness, trance, sleepwalking, and the like are forms of split personality occurring spontaneously, and that hypnotism is an artificially induced form of the same thing.

UNSUCCESSFUL ATTEMPTS TO TRANSMIT INFLUENZA

RECENTLY we described certain unsuccessful attempts to inoculate persons with influenza, stating that the experiments showed, (1) That these individuals were absolutely immune to influenza; (2) that influenza is not a communicable disease; or (3) that it is transmissible in some way not now known. We give below the description of the experiment as quoted from the *Scientific American* of Feb. 1, 1919:

> "In this investigation which was carried on in both Boston and San Francisco, over one hundred men of the Naval Training Station volunteered to submit themselves to experimental inoculations. By means of sprays and swabs filtered and unfiltered, secretions from active cases of influenza were transferred to the nose and throat of the volunteers. In addition to this, pure cultures of Pfeiffer's bacilli were similarly introduced; for, after all, it was still important to know whether this could produce typical influenza. Finally, in order to reproduce natural conditions as much as possible, a group of volunteers, brought into a ward in which were active cases of influenza, leaned over each of ten bed patients, conversed a few minutes and allowed the patients to cough in their faces.
>
> "And the result? In not a single instance was influenza thus produced in any of the volunteers."

There is a fourth possible explanation for the failure to inoculate these men, namely that the disease is transmissible only at a certain limited period, and none of the patients at the time of the experiment were in the infectious stage. Take your choice of the four speculations. In any case, it is difficult under the circumstances to understand why influenza is so extremely infectious.

This is a reminder that a physician of Chicago, in a paper read before a medical body in that city in which he claimed to have treated five hundred cases of influenza without a single death, asserted his belief that influenza is not an infectious disease, but one caused by some atmospheric condition. We know at least that there are some things yet to be learned about the disease.

THE USE OF DRUGS IN INFLUENZA

DR. BEVERLEY ROBINSON, in the *Medical Record* of March 29, pays his respects to some of the very commonly used drugs in influenza. He says, for instance:

> "In no case is it advisable to give uncertain or injurious remedies. Such are, in my judgment, acetanilid, aspirin, antipyrin, phenacetin, except in very small doses. The first drug I positively eliminate from all useful medication."

But he is not a drug nihilist. He has a few drugs on which he places some reliance, as the following quotation from the same article indicates:

> "If we have none that will positively and safely cure, we do have remedies which will ameliorate and lessen the severity of influenza. What are these? Those like castor oil and sweet spirit of niter, which have proved beneficial in many cases, and surely do little or no harm. Among all the drugs with which I am familiar, as I have affirmed many times already, there is none quite equal to salicylate of ammonia, given in the beginning of a cold or influenza, in sufficient and frequently repeated doses. Of course, the giving of this remedy does not mean there should not be absolute insistence in every case upon observance of general rules of rest, diet, etc., which have been of known value to very many in my observation and that of all experienced practitioners."

QUESTIONS AND ANSWERS

Conducted by J. W. Hopkins, M. D., Washington (D. C.) Sanitarium

This is a service for subscribers to LIFE AND HEALTH.
If a personal reply is desired, inclose a three-cent stamp.
If you are not already a subscriber, send also the subscription price with your question.
Replies not considered of general interest are not published; so if your query is not accompanied by return postage for a personal answer, it may receive no attention whatever.
Remember that it is not the purpose of this service to attempt to treat serious diseases by mail. Those who are sick need the personal examination and attention of a physician.
State your questions as briefly as possible, consistent with clearness, and on a sheet separate from all business matters. Otherwise they may be overlooked.

Mouth Breathing

"Will you tell me whether mouth breathing is really dangerous; and if so, why it is?"

Mouth breathing is certainly dangerous, in that it tends to undermine the general health. The nasal passages are admirably fitted for their function,— to prepare the air so that it will be nonirritating to the more delicate air passages of the chest and throat. It changes the ingoing air in three ways: It warms it, adds moisture to it, and removes the dust and germs. In mouth breathing, the raw air, unwarmed, unmoistened, and uncleansed, goes directly into the delicate air passages, to cause irritation, congestion, and perhaps more serious trouble. Infectious diseases are probably more liable to occur in mouth breathing than in nose breathing. G. H. H.

Health Foods

"What is the meaning of the expression 'health foods'? Are these certain foods that have medicinal value?"

One might think so from the name; and there have been those who have used the word in a restrictive sense, applying it to certain manufactured foods sold in cans and cartons. And some have actually thought that such foods are in some way superior to all others.

The fact is, there is probably no combination of cartoned and canned foods that, eaten exclusively will give as good health as will a judicious selection of natural foods. The canned and cartoned foods have their use — often an important use; but that is not to supersede the natural foods.

When one takes wholly to such foods and discards fresh fruits, fresh vegetables, milk, and the like, unless it be in case of some illness in which these fresh foods might be harmful, he is running a serious risk.

A careful study of pellagra has shown what a fearful risk one is running when he adopts some one-sided diet, and neglects to use some of the foods nature intended for him.

G. H. H.

Swimming as an Exercise

"What is your opinion of swimming as an exercise?"

Swimming is one of the best of exercises, possibly I might say the best. It calls into play all the muscles, as walking does not. It enables one to exercise freely without getting warm. It is more stimulating mentally and physically than other exercises. The delight of the small boy at the privilege of a swim is the manifestation of a true instinct. The boy instinctively knows what is good for him. It is a tonic to his nerves, his body, and his mind.

That is, if it is not overdone. Swimming may be injurious as well as beneficial. Too often it is overdone. Many swimmers are not content to take a moderate amount of this exercise, but remain in the water until they are chilled. And then some engage in swimming, or at least in cold water bathing, who are not strong enough to do so. They wade or stand around on the beach until they are blue with cold. This, decidedly, is not a proper method to get good out of bathing. Even the vigorous should as a rule remain in the water not over thirty minutes to an hour. Those who are not so strong do best to remain in only a few minutes — at least they should thus limit their bathing until their reaction is sufficiently improved to stand longer exposure. G. H. H.

Denatured Foods

"What is meant by the expression 'denatured foods'?"

Foods as prepared by nature are as a rule fairly well balanced. They had to be so, or man in his ignorance of food value, not knowing how to make right combinations, would long ago have perished off the earth.

It was when man began to be dissatisfied with nature's products that he "sought out many inventions." Alcohol was one, only that is not properly a food, but a poison. Another was white flour; another white, or polished, rice; another, refined sugar.

Each of these foods has been doctored to make it more acceptable to the modern palate of man. None of them has added to it a poison, but all have taken from them certain food elements essential to health. Natives living largely on polished, or white, rice contract the disease beriberi. The fishermen of the coast of Labrador, when on a diet consisting largely of white flour, had a similar disease. The people of Southern United States,— since economic conditions have changed the diet,— decreasing milk, vegetables, etc., and increasing their use of white flour, bolted cornmeal, molasses, bacon, etc., have had a veritable plague of pellagra.

Denatured foods are the foods man has made in his attempt to improve on nature by the refining process, which often removes some of the most valuable constituents. G. H. H.

Climate and Health

"Do climate and weather have an appreciable effect on health?"

They undoubtedly do. Certain localities, without any particular excellence of health administration, have a lower death rate than other localities. A life table based on the mortality experience of a certain community will be quite different from that prepared for another community. Careful studies have shown what are the advantageous and what the disadvantageous climatic factors.

As to the influence of weather on health, one has but to look at a diagram showing the effect of summer heat on intestinal disorders, and of winter cold on respiratory diseases.

G. H. H.

Dry Diet

"What are the advantages, if any, of a dry diet?"

None, perhaps, for the ordinary person of average health. Some invalids may do better on a dry diet, but not all, by any means. The dry diet seems to have been first suggested on the supposition that the gastric juice should be concentrated in order to do its work. This would appear not to be so. Within certain limits chemical action takes place as well in dilute solution as in strong solution, or better. Not the concentration of the gastric juice, but its total quantity, determines the amount of its action.

In some cases of slow secretion, the food in the stomach is in a solid mass not readily penetrated by the digestive juices, and the addition of some drink hastens the softening or emulsifying of this mass, thus favoring the stomach movements and the more thorough mixture of the food with gastric juice.

At any rate there is no question whatever that many persons feel better and digest their food better, when they take a little liquid with meals. Carefully conducted laboratory experiments also indicate that the physiological functions are better on a diet containing some fluid than on a perfectly dry diet.

Of course, liquid at a meal should not be taken in such a manner as to favor careless mastication. G. H. H.

Specific Foods

"Our garden books teach us to use potash to develop wood, phosphorus to develop fruit and seed, and nitrogen to develop leaves. Can we thus partake of foods to develop certain parts of the body? Are there foods advantageous for the brain worker and other foods for the muscle worker?"

By analogy with the nutrition of the plant kingdom, we might naturally expect to find certain foods especially adapted to build brain, other foods to build muscle, other foods to build bone. To a certain extent this is true.

It is true that we cannot build bone with foods that do not contain lime. But there are none of our foods that we can characterize particularly as bone-making foods. Certain foods, like meat and the cereals, especially the milled cereals, are very poor in bone-making material. Milk, on the other hand is comparatively rich in lime. Still we cannot call milk a bone food any more than we can call it a brain food or a muscle food. It is an all-round food. There is no one food that makes a specialty of nourishing the brain, or the muscles, or the bones, or any other tissue.

Most of our foods are general-purpose foods; they help build up various structures of the body. Much the larger portion of our food, consisting of starch or sugar or fat, goes not to build up tissue, but to be stored as fuel, to be used later in the production of heat and energy. G. H. H.

Organic Acids

"Are the organic acids of equal value in the body?"

Apparently not. Oxalic acid, for instance, is a rank poison in anything but minute quantities. During the war, people in England, eating the leaves of the rhubarb plant, obtained enough of this acid to produce serious and even fatal effects. Fortunately not many of our foods contain this acid, rhubarb being the principal one.

The fruit acids appear not to be of equal value. Malic acid and citric acid are oxidized in the body to alkaline carbonates, thus increasing the alkali reserve of the body; but tartaric acid, found principally in the grape, remains an acid, and is excreted by the kidneys as an acid. Laboratory work would thus seem to indicate that the acid of the grape is inferior to that of the apple or pear, and to that of the orange or lemon or grapefruit. But so far as I know, clinical observations — that is, observations of effects on patients — have never substantiated this theory. G. H. H.

Laxative Diet

"What is meant by a laxative diet?"

A laxative diet is one containing usually a large amount of woody matter to act as a stimulus to the intestinal movement or peristalsis. Among the coarse foods valuable for this purpose are, (1) the whole grains,— wheat, corn, barley, rye, etc.,— and the foods made from them, such as Graham bread, whole-wheat bread, unbolted cornmeal mush, cracked wheat, and the like; (2) the coarse vegetables, including cabbage, cauliflower, root vegetables, and others; (3) many of the fruits, as apples, figs, prunes, dates; (4) the sweets, as honey, sirup, molasses.

If one has a tendency to constipation uncomplicated by other serious digestive disturbances, there is a wide range of laxative foods from which to select; but if, in addition, one has an acid stomach or other digestive disturbance which is aggravated by the use of some of these laxative foods, then the selection is much more restricted. But ordinarily one can find in the list of laxative foods some which will not do harm while assisting the bowel action.

As a last resort, where one cannot use sufficient laxative food to maintain regularity, one may have recourse to agar or mineral oil. These substances can now be obtained at most drug stores. G. H. H.

BOOK REVIEWS

World Power and Evolution

by Ellsworth Huntington, Ph. D. Price, $2.50. Yale University Press, New Haven, Conn.

Dr. Huntington, who has done much research work in geography and climate, and who has issued a work in "Civilization and Climate," attempts in the present work to show that the variations in temperature and in humidity have a telling effect on health, on business success, and on the development of civilization.

His chapter on climate and health is particularly interesting. His studies are based on a correlation of the temperature and humidity over a period of several years with the death rate in various sections of the world, and he obtains results that are remarkably confirmatory of his views. But to the writer of this article it looks as if Dr. Huntington's attention was directed so much to the waves that he neglects to consider the tides. It is the tide rather than the wave that shows the real height of the water. Moreover temperature and humidity are things which man can and does control to some extent. One factor that he cannot control in ordinary life is barometric pressure. That affects the whole population whether outdoors or in the house, whether in a natural or an artificial climate, whether in ventilated or unventilated homes. Until he has made barometric correlations, his results with temperature and humidity, both of which are more or less controlled by man, may be received with some caution.

The book is written largely from the evolutionary viewpoint, the effect being made to show that climate is chiefly instrumental in determining the course of organic and human evolution.

Diet Lists of the Presbyterian Hospital, New York City

by Herbert S. Carter, A. M., M. D. Second edition thoroughly revised, $1.25 net. W. B. Saunders Company, Philadelphia and London.

In harmony with the advancing knowledge of the principles of dietetics, especially in the treatment of disease, this edition has been thoroughly revised and enlarged. The new material includes a fairly complete description of the Allen treatment of diabetes, including a classification of foods in accordance with their carbohydrate content.

Though the importance of Professor Chittenden's low-protein standard is recognized and the menus contain less protein than is usually given in hospitals, they are not by any means such menus as are used in the chain of sanitariums connected with the movement for which LIFE AND HEALTH stands, and which discard entirely tea, coffee, fish, flesh, and fowl.

Among the diet lists which are given in detail (in some cases the menu for an entire week) are: Regular house diet, convalescent diet, soft diet, typhoid diets, pneumonia diet, diets for kidney, stomach, and intestinal disorders, diabetic diets, purin-free diets, obesity diets, etc.

The book contains some miscellaneous recipes for preparing some of the foods, and a number of valuable reference tables of food values, etc.

The Child's Unconscious Mind

The Relations of Psychoanalysis to Education. A Book for Teachers and Parents, by Wilfrid Lay, Ph. D. $2. Dodd, Mead & Company, Fourth Avenue and 30th Street, New York.

As the title page indicates, this is an attempt to apply the principles of psychoanalysis to education. It would seem to the writer of this review that the author takes for established fact much that is at best only tentative. Many revolutionary statements are made for which no proof is given; and to one who has not yielded himself completely to the psychoanalytic view, they are very much in need of proof. The author's viewpoint is not always entirely clear from the language, and finally, there seems to be a failure to develop any practical educational methods based on the new theories.

If any instructors who read this notice have received help from the book, the editors of LIFE AND HEALTH will be pleased to hear from them.

One teaching of the book which is probably in harmony with the teaching of the psychoanalytic school, seems to be that psychoanalysis is a means, and the only means, of salvation from sin. Such teaching, to put it mildly, is certainly revolutionary. Note the two quotations. "Believing that an error is but the miscarrying of a wish to create, one cannot consistently attribute blame to any one, man, woman, or child, nor say that any act is a fault. . . . No person who has not been introduced to his own unconscious and shown a method of controlling it, can be held responsible for what it makes him do."

Reconstruction Therapy

by William Rush Dunton, Jr., M. D. 236 pages, 30 illustrations. Cloth, $1.50 net. W. B. Saunders Company, Philadelphia and London.

In the belief that every human being should have both physical and mental occupation, and that occupation is as necessary to life as food and drink, Dr. Dunton has been helping to develop a practical system of occupation or reconstruction therapy, not merely for the maimed returned soldier, though it includes that, but for the return of many others to usefulness, who through physical or mental defect might otherwise become a continuous burden on society. Occupation, as applied to the invalid, is divided into, (1) Invalid occupation, intended to keep patients content and to prevent their becoming melancholy; (2) occupational therapy, intended to restore the patient to physical and mental health by means of well-planned work, exercise, amusement, etc.; (3) vocational education, the training necessary to fit the individual for some useful occupation; (4) re-vocational training, the training necessary to fit a maimed man to go back to his old calling.

The book gives specific directions for those desiring to establish such training courses, and at the end there is a bibliography on occupational therapy.

NEWS NOTES

Causes of Army Rejection

Among the principal causes of rejection from military service for physical unfitness are the following: Heart and blood vessels, 13.07 per cent; bones and joints, 12.35 per cent; eyes, 10.65 per cent; tuberculosis, 8.67 per cent; development (height, weight, chest measurements, muscles), 8.37 per cent; hernia, 6.04 per cent; mental deficiency, 5.24 per cent; nervous and mental disorders, 5.07 per cent; flat foot, 3.87 per cent. This makes about three fourths of the total.

Fly Poison

Where breeding places have not been taken care of and flies are numerous, it may require screens, traps, swats, sticky paper, and poison to get ahead of them. When it is advisable to use fly poison, the following is to be recommended, for while it is death to flies, it is practically harmless to human beings, even children. Add three teaspoonfuls of sodium salicylate to a pint of water sweetened with brown sugar. Put blotting paper in saucers, or plates, and keep it saturated with this solution. The flies will do the rest.

Chloroform by Tube

Dr. Guisez, of France, has recently introduced a new method of administering chloroform. Instead of using the face masks, he inserts a tube into the windpipe and introduces the chloroform vapor directly into the lungs. The new method has been employed successfully in several hundred cases, according to the *Scientific American*. It is especially useful in operations on the head and neck. Perhaps the greatest value of the new method lies in the fact that it is never followed by nausea, an almost constant accompaniment of the old method of administration.

New York Gains by Abolition of Coroner

The city of New York has had a year's experience without a coroner, the work of investigating sudden deaths being now carried on by a medical examiner. The budget for 1917 under the coroner system was $158,000, as against $92,000 in 1918 under the new system, and that notwithstanding the fact that in 1918 there were more accidental deaths and homicides than in 1917, and that the medical examiner made scientific examinations in cases of accidental poisoning that were never attempted before. Unless "politics" prevents, it looks as if the antiquated coroner system is doomed to be superseded.

Work of the Rockefeller Foundation

Of the $6,750,000 available for 1919 the Rockefeller Foundation will devote $2,367,130 to the advancement of public health and $3,726,594 to medical education. The public-health activities will be directed largely toward the eradication of tuberculosis in France, yellow fever, malaria, and hookworm. General Gorgas, in charge of the Yellow Fever Commission, is to work in Central and South America. The Tuberculosis Commission will continue its work in France, in accordance with the request of the French authorities. Work on malaria, principally in the form of demonstrations, will be conducted in two States, and work against the hookworm will continue in twelve States and twenty-one foreign countries. This is only part of the work being done by this Foundation.

Poisoning from Nursing Bottles

For some years nursing bottles have been made of crystal glass, which is tougher than ordinary glass, but which contains lead. Recently a French physician investigating a case of lead poisoning in a baby, found that the source of the lead was the crystal glass. It is known that by boiling water containing as little as nine parts of salt to the thousand, lead chloride is formed. This physician believes that in "sterilizing," or boiling, milk in a container made of such glass, enough of the lead is dissolved in the milk to cause, if it is used over a considerable period of time, chronic lead poisoning. Dr. Guerbet, who made this observation, has asked for the passage of a law forbidding the use of lead glass in nursing bottles, or in other utensils used for cooking or sterilization.

Influenza Pneumonia in 1837

A writer in *El Siglo Medico* for December 7 has investigated in contemporaneous records an epidemic of influenza which in the above-mentioned year visited France, Belgium, England, Holland, Prussia, Germany, and Spain. Whereas the coincidence of fulminant pneumonia and grip has often been remarked, this author calls attention to the special prevalence of the former, which apparently revealed that of the current pandemic. In London, for a certain period the deaths averaged 1,000 daily, the predominant cause being pulmonary complications. A contemporary French practitioner writes of the management of these malignant complications of the grip, which gave to the epidemic a character *sui generis* necessitating a special plan of treatment. The complications were evidently largely bronchitis and bronchopneumonia.

Germinated Beans Antiscorbutic

An interesting experiment reported in the *Lancet* (London), Dec. 14, 1918, shows that beans, allowed to sprout for 48 hours at a temperature of about 60° F., and then subjected to the shortest period of cooking consistent with digestibility, are efficient in the control of scurvy. Four ounces of this preparation was fed daily to each of 27 sufferers from mild scurvy. Thirty other patients, as controls, were not given the bean preparation, but lemon juice instead. Seventy per cent of the 27 fed on sprouted beans were cured in four weeks. Of those who were given lemon juice, only 53 per cent were cured. The beans in this form are not very palatable, but this can be obviated by mixing them with other foods. This experiment is interesting in showing that the living part of plants as against the storage part, contains the protective against scurvy.

Digestive Disturbance from Tablets

A physician reports in a Spanish medical journal (quoted in the *Journal A. M. A.*, February 15) a number of cases of severe stomach disorder following the use of tablets of acetyl salicylic acid (often sold under the trade name "aspirin"). The drug was taken in the usual doses and intervals, and the disturbance began gradually and grew steadily worse, with sometimes sudden hemorrhage. The symptoms were relieved when the drug was stopped. In all these cases there seemed to be a history of previous stomach trouble, and the doctor suggests that it would be wise always to determine the condition of the stomach before prescribing this drug.

Fatal to Wild Animals

The food substitutes on which the German people have been compelled to feed during the latter part of the war period proved to be disastrous in the Berlin zoological gardens, for there numbers of the animals which were fed on the near-foods perished.

Decline of Plague in India

The plague epidemic which has been raging in India, off and on, for twenty years or more, seems to be abating. The periodical waves of the disease are less severe than at first. One reason given for this is that the rats in the plague-infected districts are developing a partial immunity. If this process continues, the chances are that the plague in India will eventually die out.

High Death Rate of German Babies

For the last three months of 1918, there was a marked increase in the death rate of German babies over earlier periods in the war, and this was higher than in prewar periods. The increased mortality is said to be due to the inability of mothers, on their scanty diet, to nurse the babies properly, or to nourish them adequately on the quantity and quality of cow's milk obtainable.

Yellow Fever Organism

Under the auspices of the International Health Board, Dr. Hideyo Noguchi, of the Rockefeller Institute, has isolated from the blood of yellow fever patients a filtrable virus (i. e., a micro-organism, much smaller than the smallest bacteria) which resembles very closely the organism which has been identified as the cause of infectious jaundice. These organisms cannot be seen with the ordinary microscope, but by what is known as "dark field illumination" (similar to the beam of light coming into a dark room which shows up the motes of flying dust ordinarily invisible) these organisms are visible.

Physical Therapy

The war has developed a good many new exponents of "physical therapy," that is, the cure of disease by natural methods, exercise, fresh air, diet, etc., as distinguished from drug methods. In France and Italy there is the "agricultural cure," the performance of farm labor, under the supervision of medical men. It has been shown that work or play in which the patient takes deep interest is greatly superior to merely mechanical exercises. As the *Medical Record* remarks editorially: "An undoubted reason why bonesetters and other unqualified physical specialists so greatly flourish, is because the qualified medical man, as a rule, is ignorant of physical therapy." Too true.

Horace Fletcher's Gift to Harvard

Mr. Fletcher has bequeathed to Harvard University a large sum, the income of which is to be used by the university for "fostering a knowledge of healthful nutrition." It is proposed to offer a prize for the best thesis on the subject "Special Uses of Circumvallate Papillæ and the Saliva of the Mouth in Regulating the Physiological Economy of Nutrition."

Uniform Type for the Blind

Librarians for the blind have heretofore been under the handicap of a multiplicity of types for the blind, making it necessary to provide books in various styles of type to accommodate the blind taught in different parts of the country. There are at present about five different styles. It has recently been decided that hereafter all books for the blind printed in America shall be in one form of type — a revised Braille.

Influenza in England

England has been having a third wave of the influenza epidemic, and it has been a severe one. Schools and Sunday schools have been closed in some places. Edinburgh has recently had a death rate of 48.6 per thousand — the highest ever recorded for that city, due largely to influenza. The principal protective measures are gargling the throat and washing the nostrils with a solution of common salt and potassium permanganate. Though suggested in the newspapers, masks have not been adopted.

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