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A JOURNAL DEVOTED TO HEALTHFUL LIVING

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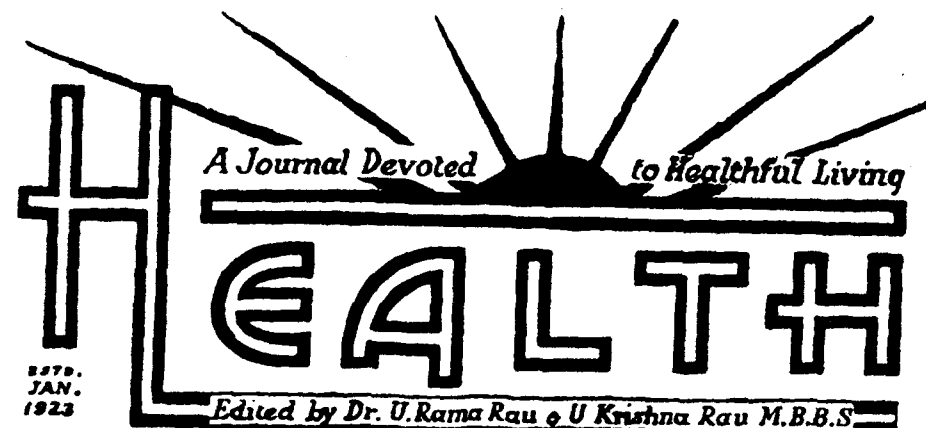
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Vol. XXIX

FEBRUARY, 1951

No. 2

VILLAGE HEALTH COMMITTEES

WE are glad to note that our New Year suggestion to our readers to engage themselves wholeheartedly this year in the constitution of Village Health Committees, not only to make the people health-conscious but also to mobilise public support to the demand that top priority should be given to schemes for the improvement of public health and the extension of medical relief far and wide, has received such powerful support from Dr. BANNERJEE, President of the All India Medical Conference held at Sholapur in December last. Addressing the Conference he said: "I may further suggest that to make the people health-conscious, (1) We should set up Health Committees in each village or at least one such committee attached to each Village Panchayat. A doctor practising in the locality or even a rehabilitated Vaid or Hakim

should serve in the Committee as Health Adviser; (2) Health education should be imparted to the children as early as possible right from the Primary School stage and continued all through their student career. What is essential is hygienic training (personal as well as community hygiene) should be practically imparted. Promiscuous urinating, defecation and spitting should be discouraged, dangers of coughing and sneezing without due care, dangers of diseases spreading through insect vectors, dangers of catching dysentery, cholera, typhoid fever and other diseases through infected food, polluted air and water and the value of protective inoculation or vaccination should be impressed on them. Short talks, accompanied by coloured posters or lanterns, or even if possible appropriate cinema films on health education, should be

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[February, 1951]

provided in all village fares, melas or at large congregations of people. Exhibitions of such cinema films should be made compulsory in all cinema houses in their daily shows, throughout the length and breadth of the country." We have also received a number of letters from our readers requesting us to elucidate to them how they can set about the task in right earnest and make their Village Health Committees the effective media for health propaganda.

While the plan suggested by Dr. BANNERJEE should be our aim if positive health is to be assured to the people, we have at the same time to take note of the existing situation and so devise our plan as to make it feasible and practicable. India is a country of villages, and many of the villages are completely cut off from the civilised world, with no easy means of communication, with no schools to teach to the children of the school-going age the three R's, with no educated man or woman among them, or with but a handful of them, pursuing their primitive methods of agriculture and unable to meet even their limited requirements, living under the most unhealthy and insanitary conditions and falling an easy prey to many infectious diseases and the like. It is these people, who form a large part of our country's population, that are very badly in need of immediate and urgent attention. Steeped as they are in absolute ignorance and with no one trusted by them among them, whose words they can take as gospel truth and act upon, the problem is one of considerable difficulty and complexity that all the ingenuity of men well-placed

in life and well-fitted for the task is required to educate them in ways of healthy living and improving their present miserable social and economic position. Section 3 of the Madras Village Panchayats Act which has recently been placed on the Statute Book, lays down that the Inspector of Local Boards and Municipalities shall, by notification, declare every revenue village with a population of not less than five hundred to be a village for the purposes of this Act and specify the name of such village; group a revenue village with a population of less than five-hundred with any contiguous revenue village or villages so that the total population of all the revenue villages so grouped is not less than five hundred; declare the revenue villages so grouped to be a village for the purposes of this Act, and specify the name of such villages. Section 4 (1) of the Act says that a Panchayat shall be constituted for each such village with effect from a date specified in that behalf. Section 1 (3) lays down that the Act shall come into force on such date as the Government may, by notification in the Gazette, appoint. There is therefore no question of this Act being brought into force only in particular areas on a particular date. It has to be brought into force throughout the Province on a date fixed, and when that date is so fixed the matter will come within the cognisance of the Inspector of Local Boards and Municipalities, and he will have to make the declaration above referred to. "The members of the Panchayat shall be elected in such manner as may be prescribed", says Section 7, and the

term of office of these members shall, according to Section 10 (1) of the Act, be three years. Among the functions of the Panchayat are laid down (a) the construction, repair, maintenance of all public roads in the village and of all bridges, culverts, road-dams and cause-ways on such roads; (b) the lighting of public roads and public places; (c) the construction of drains and the disposal of drainage water and sullage; the cleansing of streets, the removal of rubbish heaps, jungle growth and prickly-pear, the filling in of disused wells, insanitary ponds, pools, ditches, pits or hollows and other improvements of the sanitary condition of the village; (e) the provision of public latrines and arrangements to cleanse latrines, whether public or private; (f) the opening and maintenance of burial or burning grounds; (g) the sinking and repairing of wells, the excavation, repair and maintenance of ponds or tanks and the construction and maintenance of water-works for the supply of water for washing and bathing purposes and of protected water for drinking purposes; (h) preventive and remedial measures connected with any epidemic, or with malaria; and so on and so forth.

Those who seek the franchise of the people for election to the Panchayat will therefore have to place before the electorate a definite programme of the work they propose to do if they are elected to the Panchayat. This will afford the opportunity to the people not only to learn something of the rules of hygiene and public health, but also enable them to press on the attention of the candidates

seeking their support the various evils from which they are suffering and to demand of them an assurance that these will be removed. But some people may ask why when village panchayats are constituted and when most of the functions assigned to them relate to public health and sanitation, there should be constituted separate Village Committees. We would ourselves have held the same view, were it not for the political trends that had become widely manifest in recent years. It has become almost a habit with the people, as a result of intense propaganda carried on in the country for a number of years, not to examine the merits and demerits of the candidate who is seeking their support but to look to the party label he wears and blindly vote for the candidate of the party for which they have a liking, without any consideration whatsoever of the ability of the candidate or his programme of work. In politics, in elections to Legislative Assemblies, this may have some meaning, some purpose to serve, but not so in matters relating to public health and sanitation where there is absolutely no justification whatsoever for such different labels. But when a habit is well formed, it is not easy to make the people give it up suddenly. We would not be surprised if with the approach of the general elections, more and more parties spring up and more and more party labels play a prominent part even in Village Panchayat elections at least for some years to come. It is therefore necessary that a separate organisation should exist in each village not only to educate the people on

these matters, but also to keep a vigilant watch over the activities of the Panchayat and bring it to its senses and to a realisation of its responsibilities, whenever it goes wrong. The election propaganda is bound to educate the people and make them open their eyes to the actualities of the situation and if only they utilise the knowledge so gained in their own interests, the constitution of these Committees and their proper and efficient functioning would become accomplished facts within a reasonable period of time. There are many problems connected with these, viz., the constitution of these

committees, the mode of their election and the manner of their functioning, the constitution of Taluk, District, Provincial and All-India Committees and the affiliation of each committee to its next immediate superior body, and so on and so forth. As a first step in this direction, we would suggest the holding of a Conference of all those interested in the improvement of village health at a central place in the near future, to devise suitable measures in this behalf. It is only by taking early and effective steps in this direction that results can be achieved.

WHO Expert Committee on Rabies

There is no cure for rabies, and cases that develop, in human beings, are always fatal. Treatment measures therefore are concentrated on preventing the disease from developing. The World Health Organisation has taken international action in research in this regard and the report of its first Expert Committee on Rabies, which included three US members, will shortly be published. Among its many recommendations are field trials of serum for human beings and a new vaccine for dogs.

While vaccines have been used extensively in the past, ever since Pasteur evolved the first anti-rabies vaccine, no perfect method has been available nor have results been completely satisfactory. The WHO-controlled trials proposed will, it is expected, throw a completely new light on anti-rabies methods. Vaccines in widest use at present are developed from virus grown in the brain tissues of rabbits and sheep, and a recent discovery is that of ultra violet light irradiated virus vaccine. Mice, incidentally, may also be carriers of the disease and cases have been reported of mice attacking man. The reason for this unusual behaviour is that animals, wild ones especially, change in characteristics when infected by rabies, and foxes have approached human beings and even entered houses to bite people.

The WHO Expert Committee on Rabies has laid plans for thorough investigation of the problem on an international plane with a view to evolving improved safeguards for all countries. In the event of being bitten by an animal suspected of having rabies, it is recommended that the wound be plentifully washed with ordinary soap and medical attention immediately sought. The suspected animal should be kept alive for veterinary observation.

Rabies can be given to farm animals and human beings by the wolf, the jackal, the mongooses and the fox, the latter being responsible for far more infection among livestock in certain regions than the domestic dog.

Vampire bats have a place of their own in rabies transmission as they are the only creatures known to acquire the disease and recover. Moreover, since they carry the rabies infection for months without dying, they are able, by biting cattle, horses, or human beings, to spread the disease on a wide scale in Mexico and other parts of Central and South America.—WHO Release.

ATHLETICS FOR HEALTH

—A Survey of Ancient and Modern Ideals

Rao Sahab T.N.S. RAGHAVACHARI,

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St. Thomas Mount, Madras-18.

PROFESSIONALISM in sports or athletics is a very old theme, as old as written history; but it is perennially news. Two thousand five hundred years ago, the Greeks got excited over the fact that some of their athletes, had started exhibiting their prowess and skill for a livelihood. This situation is now beginning to be evident in the modern world of athletics.

There are indeed two schools of thought concerning this. To one, athletic exercise appears as a spectacle to be watched, an exhibition of strength and skill that thrills, amuses and interests the spectators. To the other, athletics and sports appeal as a mental and physical discipline, and as a means whereby the body and character of the participant are developed, and robust health is maintained.

But at the present day, even the latter school is not averse to sportsmen appearing before spectators in the role of amateur actors. It is here, that the viewpoints overlap and give room for discussion.

Indians have, from time immemorial, been freely indulging in sports and athletics of a different but equally varied nature, suited to our cultural attainments, traditions and needs. As a result of our intimate contact with Western culture and civilization, several sports and games, not indigenous to our land, have been introduced and we have taken to them with considerable zest, during the

last 200 years. We are becoming also increasingly interested in these sports. These sports, imported from the West, have their own value and contain certain points of merit and some aesthetics also.

It would be a counsel of perfection, if we made a judicious combination of all that is good in the two systems and revived some of our ancient games and sports, both out-door and in-door. Also we should learn to blend in our lives the roles of the amateur sportsman and the critical spectator. Greece of old was a nation of amateurs, while the nation of critical spectators was Rome. Into the lives of both these nations, sport entered to a great extent and exerted a profound influence in shaping their national characters. The Grecian games were the forerunners of all modern athletic competitions, including the olympics, and started as a form of religious observance. (History tells us that some of our ancient Indian games had a similar origin).

The contests in Greece were usually held in honour of some god or hero. Even wars in progress, were suspended by a sacred armistice, during the games. The warriors, marked their positions

on the field of battle, then discarded their military uniforms and kit and went into training after greasing their bodies. Ten months of training was the minimum requirement for any contestant. Participation in these contests was an honour sought even by men of exalted position; this proved to the world that the contestant was in good moral standing, had no moral or civil stain on his character and was above all a true Greek. The victor in each contest was presented with a wreath. A herald proclaimed his name and parentage. The Greeks worshipped perfection of bodily development. The clean, wholesome and amateur sports, aspired to by every Greek, exerted a tremendous influence in moulding the national character of that nation and also produced that unique type of physical and intellectual beauty that is seen reflected in all Grecian art and literature.

When Rome conquered Greece, the latter gave the Romans the professional athlete. No Roman would engage publicly in games; for him, to drive his own chariot in public was a scandal. The athletes who performed in the games were often drawn from the lower ranks of the Greeks; these were of low character. The Romans developed a taste for athletic spectacles and the Roman games became the Roman circus and the *circus maximus* had seating accommodation for 350,000 Roman spectators. No admission fee was levied. The ease-loving Roman spectators were not amateur sportsmen interested in the five points of sportsmanship. They came only to be thrilled by a

gladiatorial show. They wanted the arena flooded with fleets manned by prisoners who would fight to a finish. To pique their taste, animals were also brought in; lions and tigers fought with men. Julius Caesar is stated to have originated the bull fight. It was *professional exhibition* carried to excess for a nation of spectators!! Eventually the debased athletics had its share in bringing about the downfall of Rome by a lowering of the national physique and national character. Rome fell and Roman athletics naturally shared in the downfall.

The athletics of the other countries of Europe were of a different kind resembling those of King Arthur. The sword, the lance and the battle-axe formed their kit and the kingly tournaments were the manifestations. These were amateur affairs. In the sixteenth century the colleges of Europe suppressed sports more rigidly than they did crime and wickedness. The University of Leipzig issued a proclamation levying severe penalties against even simple amusements as bean-shooting and wrestling. Boys were deprived of the spirit of sportsmanship and fair play which only competitive athletics can foster and develop.

Gradually, however, interest in amateur sports returned in the 14th, 15th and 16th centuries in Europe and the beginning of the "*Amateur sports and competitions movement*" in the United States of America dates back to about 1850. Boat races, baseball games, football tournaments, and the gymnasia soon followed one after another and swimming contests crowned

the whole show. The same sequence of events followed in our own country—India—and these sports have now become as important adjuncts to every school and college as are their libraries and class-rooms. The Grecian ideal of athletics has spread quickly in nearly all the countries of the world. The rapidly expanding modern idea is athletics for every boy and every girl—some kind of body building, character forming sport for all students and also for all adult men and women. Education, without athletics, is now rightly considered '*incomplete*' if not worthless. Graduates leaving the Universities are imbued with ideals of sportsmanship—at all events they go out with high hopes of being able to pursue and maintain their interest in the games and sports in which they participated while at school and college. Older men and women are now-a-days taking to Tennis, Golf, and other games, as at no previous time in the history of our country. To my mind, the greatest single force operating on our young people that will make for good citizenship, respect for law and order, and diminution in delinquency, is *organised amateur athletics*.

There is, then, the medical aspect to be reckoned with. There should be adequate medical supervision of all sports—whether at school or college or in adult life. The desirable competitive element in athletics necessarily involves some amount of physical strain on the participant; often he is liable to exert himself beyond his normal limits of fatigue. We sometimes hear it stated by many people who

are obviously ignorant of the anatomy and physiology of the vital organs that a college student, (*i.e.* an young man of 18 to 23), with no defect of heart or lungs, in good health and well trained, cannot injure himself (his heart particularly) by over-exercise. Note the limiting conditions imposed! *viz.*, mature age, good heart, strong lungs, and adequate training. It will be realised that moderation will be the counsel of perfection as one can never be certain of the continued soundness of his vital organs under all conditions of stress and strain. Properly organized medical supervision (by the agency that should be employed for medical inspection of students in every school and college) will alone ensure safe athletics suited for individual needs. Every contestant selected for competitive tournaments and contests, should particularly be given a complete medical examination to judge of his physical fitness for the particular competitive sport.

The most serious health hazard from athletics usually occurs after school and college years. The graduate who played cricket or football regularly or raced at school and college, takes his place at a desk or a bench; he is no longer able to play the games regularly. As years go by, his muscles soften and he gets obese. The muscles of the arms and legs get flabby and the same thing happens to the heart—perhaps to an even greater extent. For such a person, two sets of Tennis or two rounds of Golf played on a week-end holiday may prove a very great strain and often he realises this too late after his health is

seriously injured! The athletic activities of the vast majority of persons over thirty years of age, are practically confined to walks (in the scorching sun) to and from their offices—perhaps also some boxing and sparring and gymnastic feats, incidental to getting into overcrowded buses and trams after a heavy morning meal—and therefore, his activities on the health-giving athletic side are practically nil: So he is rarely in good physical condition. The paucity of food supplies and the phenomenally high prices add to his woes, which really started with his phenomenal success at procreation!! Many of these young-old-men have not, however, lost their athletic spirit, though their vital organs may be weakening. They should be encouraged to continue some athletic endeavour. Let it be of a nature suited to their changed environments and mental make-ups.

The Yoga Asanas, Surya Namaskara poses, and breathing exercises involving stretching and bending of the body and limbs, will be quite suitable for those past the prime but still under 60, as these will not ordinarily interfere in any way with their other daily avocations and still keep them in good health and cheer.

Even those who are past sixty and cannot indulge in active athletics or sports, can still take gentle exercise, and keep their limbs and internal organs in a sound state of health and usefulness. Aristotle defines Health (Hygieia) as "that virtue of the body by which we exercise our use of our bodies free from disease". He also deals with well-being in old age. (Eugeria, as he calls it) which implies "also the physical qualities such as health, beauty, strength, bigness, active muscular power; also reputation, honour, good fortune, virtue. For, thus equipped a man would be most self-sufficing if he should have these inner and outer goods and there are no other things that matter beyond these". So old people past sixty should not omit to take gentle exercise daily e.g., short walks, gently rocking the whole body for ten to fifteen minutes while still in bed every morning. Suriyana-maskaram and breathing exercises—Pranayamam.

Let us, young and old alike, follow the Grecian ideal in athletics; let us strive to become a nation of good sportsmen, with excellent physique. Athletics will build us up; but moderation and systematic control of the physical exercises to suit individual needs should always be kept in mind.

Wit & Humour.

1. How old are you?

Cheeky boy.—That is a difficult question, rather.

My psychological age has been estimated at 12, my moral age 4, my anatomical age 7, and my physiological age 6. But, I suppose you refer to my old fashioned chronological age which one seldom thinks of nowadays—it is 8.

2. My girl turned me down. I am going to commit suicide. I've nothing to lose.

Well, tighten your belt, friend, you are losing your pants!

3. Where did you get the black eye?

You know the pretty little woman, who said she was a widow?

Yes. Well, she isn't.

—*Revue Medicale.*

"Why Executives Drop Dead"

Two explanations are given for the great increase in deaths from circulatory disease. One is faulty living habits, physical and mental. The other is the aging of the population. A larger proportion of the population now reaches the age at which they are more susceptible to these ailments than in previous decades. Of course, both are factors. A comprehensive article on this subject, entitled *Why Executives Drop Dead*, appeared in *Fortune* (June, 1950). The writer attributes "by far the greatest part" of the rise to the advance in life expectancy.

But his figures do not bear out this estimate. They show that in the thirty-five to fifty-four age group, thirty-six per cent of the deaths are now due to cardiovascular disease, against twenty-five per cent fifteen years ago. Increase in longevity would not account for all this difference. Furthermore, he brings out that some forms of the trouble, such as infectious heart disease, including rheumatic fever, syphilitic heart disease and bacterial endocarditis, are now yielding in part to medical progress. Surgery has been helpful in some cases. But for these advances, the change would have been even more marked.

However, the whole tenor of his article is indicated by its title. A great deal of attention is devoted to the practices which predispose to heart disorders. It is stated that the number of executives who die in mid-career seems to be rising. In 1949, General Motors lost twenty-nine men of executive

rank, sixteen of them from cardiovascular disease. But lawyers, merchants, journalists, foremen, machinists and others show a similar tendency. One study revealed that physicians have a mortality from coronary artery disease eighty-one per cent higher than that of the general male population.

Although some deaths from kidney trouble have been taken from the cardiovascular classification, over fifty per cent of all deaths in the United States this year will be from circulatory disorders. "At the going rate, nearly sixty per cent of all men past forty may contract cardiovascular-renal (kidney) diseases." Several national organizations have been established to study this problem and to meet it. One of these, the National Heart Institute, was set up by Congress with an annual appropriation of sixteen million dollars.

High blood pressure is the most elusive yet prevalent of all cardiovascular conditions. It is closely tied with an emotional pattern—highstrung, aggressive, repressive. In general, it slowly hardens and thickens the arteries, enlarges and wears down the heart and ends with one of the familiar breakdowns of the heart, kidneys or brain. In simple arteriosclerosis, the elastic, smooth walls of the blood vessels slowly harden and calcify. In atherosclerosis, the lining of the arteries is gradually roughened and thickened by deposits of fatty substances, chiefly cholesterol. The roughened areas may eventually close off some

passages by producing local blood clots. This happens most often in the critical coronary arteries which supply the heart muscle itself.

A person who has high blood pressure can add years to his span of life if he can adjust himself toward the trials and difficulties of life with equanimity. But he is usually the type who tends to abuse his circulatory system. He generally has the drive, nervous response and impatience which make him a valuable executive but a poor heart risk. To tell him to slow down is to remove what

he thinks is his reason for being. He takes his business home in a brief case. He cannot spare time for vacations. He turns lunches into conferences. He has no hobby but thinks a stiff physical workout once a week erases the bad habits of the previous six days.

One preventive measure is a physical checkup every year. Another is avoidance of overweight, which is often a deleterious factor. Of five hundred executives with an average age of 41.4 years, 30.4 per cent were overweight.—*Good Health*, (U.S.A.)

Improving World Health

As the richest nation in the world, the United States has a certain moral obligation to aid other peoples towards prosperity. Two selfish considerations point in the same direction. One is that every economic advance elsewhere tends to increase the power to buy American goods. The other is that this course helps to fight communism and hence to preserve peace. A programme for this purpose has been set up by President Truman. He calls it Point Four. This idea is not to pour out huge sums of money, as under the Marshall Plan, but rather to give scientific advice, guidance and encouragement, relying on the governments who are benefited to bear the major part of the expense.

One might roughly divide the programme into health, agricultural and industrial aspects, with education underlying them all. Adequate food production is really

basic. Without it, health and factory building are grievously hampered. In recent years, much has been accomplished along these lines, both by governmental and non-governmental agencies. Willard R. Espy in his book, *Bold New Program*, states that more than twenty million die of hunger throughout the world each year. The world population is growing at such a rate that starvation must greatly increase unless there is a tremendous upward trend in food production. This can be achieved by means of fertilizers, soil conservation, pest killers and improved strains of plants. In this country, the average yield of wheat per acre is 17.9 bushels, but a maximum of 74.5 bushels has been attained. Heavy applications of fertilizers can increase harvests sixty per cent.

An example of American teaching is the method of processing rice so as to retain the bran. By thus

saving the vitamins, twenty-five per cent is added to the nutritional value over the ordinary polished rice. This improvement was devised by a young Persian-American.

In a suburb of Georgetown, British Guiana, control of pests by means of DDT increased the food supply so much that the birth rate was doubled in two years and infant mortality was reduced four-fifths in three years.

The Rockefellers contributed seven million dollars, which was matched by eleven million dollars from the Brazilian government, to set up nine enterprises which would be helpful to Brazilians and yet pay their way. Here are some of the results: A farm was started to grow disease-resistant hybrid corn. Seed sold to farmers increased their yield twenty per cent. Grain elevators decreased handling costs fifty per cent. Small operators cannot afford to buy machinery. The Rockefellers supplied the tractors and other implements, with trained crews to run them. Farm tasks are done on small holdings for a moderate fee. A similar programme was set up in Venezuela.

For ten years, at a cost of four million dollars, our Department of Agriculture has maintained research and demonstration projects in fifteen Latin American countries. The governments there have contributed three dollars for every one spent by the United States. Similar aid is planned for eleven other lands in the Near and Far East. Malaria-bearing mosquitoes reached Natal, Brazil, by airplane

in 1930. Malaria spread so rapidly that in 1939 more than one hundred and fourteen thousand victims were treated for it. Rockefeller Foundation scientists wiped out the insects in two years. In Venezuela, Peru and Haiti, similar conquests have been made. Hookworm infestation was reduced one-half in a province of Peru. A hundred thousand persons have been cured of yaws in Haiti.

In Africa, two million cattle, camels and horses have been immunized against the deadly tsetse fly. For lack of proper storage facilities, rats, insects and fungi destroy an estimated thirty-three million tons of grain every year. Over-Seas Consultants, Limited, New York, has drawn up plans for a seven-year development to increase the agricultural output in Iran two hundred per cent. The Near East Foundation has done much for the health and productivity of Iranians. An American engineering concern, Morrison-Knudsen, has signed contracts for making improvements in Afghanistan which will eventually total hundreds of millions of dollars. The same company is now building a dam in Ceylon which will irrigate one hundred and twenty thousand acres of land by 1953. This area will yield food enough for five hundred thousand additional persons.

American millions have poured into Palestine to better health, educational, agricultural and industrial conditions. Others have gone into improving health and farming in China and Japan.—*Good Health*, (U.S.A.)

In Greece, sheep are raised primarily for milk.

TO PUBLIC HEALTH

THE credit for taking the first census of modern times is claimed by the Canadians. It was taken in 1666, for the colony of New France. The manuscript (showing 3215 persons in that colony) is lodged in the Archives in Paris. A copy of it is available in Ottawa. There were so-called censuses in very ancient days in China and Babylon 3000 to 4000 B.C. Moses also numbered the children of Israel about 1500 B.C. In the first Book of Chronicles we read that "Satan stood up and moved David to number Israel". David's census provoked the divine displeasure and led to a pestilence in which 70,000 perished. Such happenings were surely a body blow for statistics: doubtless the "questionnaire" was more unpopular in Ancient Israel than among some harassed firms in these modern days. Little wonder the counting of noses was regarded for a long time as a work of the devil. This bad reputation lingered for well over 2500 years in Europe. As late as 1753, the British House of Commons considered a resolution condemning the taking of census on religious grounds, which was moved by a member who said:

"I did not believe there was any set of men or indeed any individual of the human species so presumptuous or so abandoned as to make the proposal we have just heard, (for taking a census of the population of England and Wales)."

We read in History, of censuses in ancient Greece and Rome, of

the Domesday Book of William the Conqueror and of the Breviary of Charlemagne in mediaeval times but these were all mainly for military and taxation levies. The National Registration at the beginning of the World War II in Europe and America is a more or less parallel example. The census of New France (Canada) in 1666 was a true census in the modern sense of the term, purely statistical, comprising the periodical, name-by-name inventory of the people and their basic characteristics.

The census is now part and parcel of the common every day thinking of the people and all of us use it every day of our life. This is because the census presents the broad human back-ground against which all our other facts are reflected. A great many of us in this respect are like Mons. Jourdain in Moliere's play, who had not heard of prose, and was astonished to find he had been talking prose all his life. The Turkish nation has considered census so important that on the days it is taken every shop, every factory, every place of business was closed, the railways ceased to run and the people were forbidden to leave their homes between 9 in the morning and 6 in the evening while the census enumerator made his rounds. Man is not only a living soul for the census-taker but also a money-earner. During 1950-1951 the world is experiencing census-taking activity on an unprecedented scale. Some forty

countries are engaged in this great task. 22 of these in the Western hemisphere are working co-operatively.

Let us consider now the relationship of the census to public health. When one considers the functions of a Health Department of modern times, they are found to be so very elaborate and comprehensive with so many ramifications that it is often difficult to draw the line and say these questions have a bearing on public health and these do not. Therefore Health Departments are setting up their own economic research units. Not only the Public Health Department Staff but all people in general are deeply interested in their own health and long life. It is of importance that the general death-rate in many countries has been nearly cut in two in the past hundred years. Expectation of life at birth has increased in America by eight years and in Europe by six since the beginning of the present century. Infant mortality has also been considerably reduced in those countries. It was statistics that pointed the way to this achievement. Statistics are like the observation balloon or the aeroplane that the army sends up to search out the movements of the enemy. The observer telegraphs back information to the artillery who at once know exactly where to train their guns. It was statistics which marked the target for medical science in the long fight against tuberculosis. It is at this moment marking the target in the fights which are going on all over the world against malaria, cancer and tuberculosis. Only by factual knowledge, only by ascertaining

definitely where to direct your guns is progress possible.

The census, together with its offshoot the vital statistics, provides the yard stick against which the progress of public health can be measured. The population figures (from the census) and based on it the intercensal estimates supply the denominator many of the figures which the public health departments (National, State or Municipal) gather from their research and routine studies.

The denominator is required to calculate mortality rates, and incidence of certain diseases; we need the information as to age, and sex of the total population to calculate not only the crude but also the age or sex specific or standardized rates. Only by means of such rates can we compare conditions over a period of time or between different areas, different groups of the population and so on. "As it is for the people in the area that a health department is created and maintained, it is highly necessary and important that the Health authority should know with whom and with how many he must deal." He must know the numbers and characteristics of the people in his area.

The uses to which civic officials may put census reports are many and varied touching upon almost every phase of municipal life. They are indispensable in charting expansion and revision of every public service from water supply and drainage plants, police and fire departments, traffic regulation and health programmes, zoning for and building of schools, hospitals

and other public facilities. They are used by Government in connection with housing and other legislation. Census figures are thus, of immense value in different fields of human activity and endeavour.—(Mr. H. Marshall in *Can. Jour. Pub. Health*).

Tobacco and Lung Cancer

STATISTICS gathered from various large hospitals reveal that lung cancer is the most frequent visceral cancer among their patients. Both in this country and in some foreign lands, there has been in recent decades a great increase in the number of deaths from this type of malignancy. Many authorities have suggested a connection between the increased consumption of tobacco and the prevalence of the malady. A study of this subject was made by Drs. Ernest L. Wynder and Evarts A. Graham, of the Washington University School of Medicine, St. Louis. Dr. Graham this year received the Distinguished Service Medal of the American Medical Association. Their investigation, which covered 684 cases, was reported in the *Journal of the American Medical Association*, (Vol. 143, p. 329). They had the co-operation of perhaps a hundred other physicians. The American Cancer Society sponsored the investigation.

It was found that 96.5 per cent of men with lung cancer were moderately heavy to chain smokers for many years, compared with 73.7 per cent among the general male population without cancer. In the cancer group, 51.2 per cent were chain smokers, as against 19.1 per cent of the other male hospital patients. Only two per

cent of the cancer victims were non-smokers or moderate smokers. On the smokers with cancer, 96.1 per cent had been using the weed for more than twenty years. Few women have smoked that length of time, and this is believed to be one of the reasons why they have so small an incidence of this disease.

Of the female population of the hospitals, 79.6 per cent were non-smokers, while 11.3 per cent were moderately heavy to chain smokers, and only 1.2 per cent had been chain smokers for at least twenty years. Among the male non-cancer patients, only 14.6 per cent were nonsmokers, while 54.7 per cent were heavy to chain smokers and 18.1 per cent chain smokers. A significant fact was that cancer of the lung might develop ten years or more after the use of tobacco had been discontinued.

Of the cancer victims, 94.1 per cent smoked cigarettes, 4 per cent pipes, and 3.5 per cent cigars. The fact that nearly all cigarette smokers inhale is believed to be a factor in the increased incidence of the disease among them. Of the cancer patients, 78.5 per cent usually began to smoke before breakfast.

Another study of the relation between cancer and tobacco appears in the same number of

the *Journal of the American Medical Association* (p. 336). It is broader in scope, since it takes in malignancy of the lung, lip, pharynx, esophagus, colon, rectum and a few other sites. It was conducted by Dr. Morton L. Levin and associates at the Roswell Park Memorial Institute, Buffalo, and covers the period since 1938. It included 1,045 male cancer patients and 605 noncancer controls. About eighty per cent of all patients were smokers. There

were more than twice as many cases of lung cancer in cigarette smokers than in any other group. Lip cancer was significantly increased among pipe and cigar smokers but not among cigarette users. The report is preliminary and the study is still under way.

The *British Medical Journal* of June 24, 1950, printed a long editorial summarizing the contents of these two papers and called attention to the importance of their findings.—*Good Health*, (U.S.A.).

TAKING SNUFF

SNUFF causes mild irritation of the nose, producing sneezing in the novice. The practised snuff-taker does not sneeze but may eventually develop some degree of atrophic inflammation of the mucous membrane of the nose and the sharpness and clearness of smell are usually diminished. Sir Buckston Browne writing in the *British Medical Journal* in 1947, stated that snuff was a useful prophylactic against the common cold. Properly used snuff does not enter the pharynx or respiratory tract, which are unaffected by it. The snuff-user is not therefore afflicted by the smoker's cough. Tobacco snuff contains 0.3 to 1.0% of nicotine which is readily absorbed by the nasal mucous membrane and if taken in sufficient quantities may produce the same effect as those that arise from the smoking of tobacco: Cold hands and feet from vasoconstriction, an increase in the metabolic rate and excessive rapidity of the heart's action, inter-

ference with urine excretion, and a rise in blood pressure.

There are snuff-addicts who are reported to use 10 to 15 grammes (150 to 225 grains—nearly $\frac{1}{2}$ ounce) daily in pinches of about 2 grains each but ordinary snuffers will not consume more than an ounce a month. [Note:—In India we have confirmed snuffers who use regularly not less than 15 to 20 ounces a month, apart from a similar quantity they have to offer to comrades in snuff taking, some of whom use only borrowed snuff—[சுந்நெ. ஈடி] as it is called.] A daily dose of 15 grains (the modest snuffer's quota) contains from 3 to 10 mg. of nicotine which approximates to the 2 to 8 mg. provided by a single cigarette according to the extent of inhaling.

Snuff-taking is a satisfactory substitute for smoking which was almost completely replaced in Great Britain by snuffing for nearly 60 years. Dr. Johnson discussing changing customs while visiting

St. Andrews remarked "Smoking has gone out" and he was advised by the Governor of Fort Augustus to take a plentiful supply of snuff with him to placate the natives of the Hebrides. Smoking as a common habit did not return to this country till the heroes of the Crimean War returned to England smoking Turkish Cheroots. One ounce of the very best snuff costs about 5 shillings and should last about a month bringing the same psychological satisfaction as 20 cigarettes a day, which would cost about 5 guineas a month. [Note:—Even in our country, at the present ruling market prices in 1950, a confirmed snuff-taker will spend about Rs. 3/- a month, which would bring the same psychological effect as 20 cigarettes which would cost Rs. 25/- per month]. The present annual consumption of tobacco in the U.K. is about 5 lb. per head bringing the Government an annual income from tax of about £ 10/- per head from the entire population.

If snuff-taking replaced smoking it might beggar the Government, but it would banish the smoker's cough, reduce the incidence of nicotine poisoning and would solace the doctor in his wards, though at the expense of the necessary diagnostic sense of smell. Rather more important is the possible development of a dry and atrophic nasal mucous membrane. In some snuff users this does seem to have led to crusting and ulceration of the nasal septum (partition between the 2 nostrils) going on to perforation in some few cases.—(Br. Med. Jour., p. 1155, 13-5-1950).

[Note:—Tobacco in any form is thus liable to produce evil consequences to the human system. Chewing tobacco has been shown to produce cancer; smoking to lung diseases, heart troubles and tuberculosis as also cancer of the lips and mouth, and snuffing to the evils cited above, which certainly are the least of the three.—T.N.S.R.]

Treatment of Whooping Cough by Aeroplane Flights

476 children were treated for whooping cough in Italy by aeroplane flights, after having been medically examined to exclude children not suitable for flights at high altitudes. The maximum height reached was 12,500 feet, their stay in the air was 20 to 30 minutes, the number of flights three to six according to the results, and the interval between flights 3 to 4 days. The height was increased on each flight by 1600 feet, starting from 8300 feet. All the children undergoing treatment tolerated the flights well. All the children had previously been treated for whooping cough by various remedial measures, without success. During the flights, all other treatments were suspended. Of 476 children thus treated 290 were completely cured (no more paroxysms of whoop after the last), 50 showed improvement and in the rest there was no improvement. The treatment usually lasted for 15 days. The curative effect of the flights is related to the number of flights effected; one flight gives no appreciable results, two flights cause in most cases some improvement, but only a few cures. With each additional flight over two, more complete cures are achieved. The results obtained with high altitude flights tally with those obtained in the low pressure chamber. There is no relation to sex, age (contrary to the opinion that children under 5 show greater sensitivity) or previous duration of the disease.—(From the Italian Review of Aeronautical Medicine, June 1950).

Hormone Treatment of the Sexual Offender

THE Criminal Justice Act 1948, has stressed the responsibility of the community for adequate provision to treat the habitual sexual offender. Castration either voluntary, or as a court decree, may not be a satisfactory remedy, as there is ample evidence that the sexual urge may still persist for several years. So even after castration a sexual criminal will continue to be a nuisance to society.

Stilboestrol will eliminate libido (the basic emotional power) but the effect will last for only a few weeks after the treatment is stopped. Golla and Hodge had noticed that at the Bunden Institute, cases of acromegaly (abnormal development of the extremities of the body) treated with very large doses of oestrone (a hormone) had completely lost libido after 14 days. A maintenance dose was however necessary to maintain this state; otherwise libido returned in 14 days. Encouraged by these observations, Golla and Hodge treated 13 cases of persons with an uncontrollable sexual urge which had led them into conflict with the Law.

All the cases yielded excellent results. A prompt abolition of the sexual urge within 15 days was effected with injections of oestradiol (50,000 I.U.) daily. In many cases it was found that if oestrone (50,000 I.U.) daily was given instead, libido could be abolished in a month. A maintenance dose of 20,000 I.U. of oestrone orally is enough after the first 6 weeks. The treatment should be discontinued only when a restoration of the libido is judged to be safe and desirable.

In view of the safe and non-mutilating nature of this treatment and the ease with which it can be administered to a consenting patient, the authors recommend it in appropriate cases.—(Lancet, 1, 1006-1007, 1949).

[Note:—This may be applied to adult convicts in our jails serving long term sentences, and perhaps also to short term convicts, and further valuable data obtained regarding the temporary effective suppression and restoration at will of the sexual urge.—T.N.S.R.]

Deaths from T. B. Lowest in Britain

Deaths from tuberculosis in Britain today are the lowest ever known. The Ministry of Health states that they have now been reduced to less than 400 a week. These were 760 twenty years ago, 540 ten years ago and 400 two years ago. The Ministry points out that this striking and progressive improvement has taken place despite an increase in the population. It considers that the final figures for 1950 are likely to reveal an even further drop in mortality from this disease.—B.I.S.

[Note:—The provision for the adequate supply of balanced diet to the population and improvement in housing conditions by the construction of more and more houses have contributed not a little to this notable improvement. But conditions in India are, to say the least, appalling. No wonder deaths from tuberculosis are mounting up day by day. Only when the problems of food and housing are satisfactorily solved, can we expect any improvement.—Eds.]

Nutritional Status of Children may best be judged by Ossification (Change from Tissues to Bones) of the Bones of the Hand

OSSIFICATION of the bones of the body begins as an orderly process in utero and proceeds through the first twenty years of life. The deposition of bone starts in centres of ossification which appear at specific times. Bones of the hand and epiphyses of the distal portions of the radius and ulna (long bones of the forearm) ossify from centres appearing in orderly fashion from soon after birth until about the 6th year. X-ray evidence has accumulated demonstrating relative uniformity in time and sequence of appearance of these centres in normal healthy children. Illness has been found to cause delay or interruption of ossification (bone formation). It has been claimed that the appearance and rate of ossification of these centres relates importantly to the state of nutrition of the child. Bone development in the hand and wrist has been studied in 162 under-nourished children in Florida Schools (*Am. J. Dis. Child.*, 79: 69, 1950); All these children (6 to 13 years of age) from homes which were economically unstable. Diets

were poor and there was great prevalence of physical signs of nutritional deficiencies. X-ray observations clearly demonstrated marked retardation in the ossification of the bones of the hand in this group of under-nourished children. This retardation is significant and important as malnutrition was the primary factor in delaying ossification.

Evidence was also obtained that the deficiency was not one of vitamin D but more likely one of calcium and phosphorus, since the consumption of milk and milk products was very small. Infective diseases occurred in this group fairly frequently and may have contributed in part to the interruption of ossification.

X-ray appraisal of the bony development of the hand in children would therefore seem to offer real opportunities for addition of another index of nutritional status. This method may be further defined and evaluated as a tool in nutritional appraisal by other workers with advantage.—(From *Nutrition Review*, April, 1950).

New Machine for Treating Cancer

New machines of exceptionally high power are to be used in Britain for treating cancer and other diseases requiring radio-therapy. This apparatus will be capable of producing 4,000,000 volt X-rays. These are technically known as Linear Accelerators. They are very easy to operate and so mobile and compact that the number of patients who can be treated in a given time is expected to be much greater than is now possible. The development of these machines is a direct outcome of the work being done at Britain's Atomic Energy Research Establishment. These new instruments will be ready for hospital work in about fifteen months' time.

The Beneficent Purpose of Disease

HARRY BENJAMIN, M.B.N.A.

The outstanding feature of the Naturopathic philosophy is that it has a purpose and meaning beneficial to the sufferer, and not harmful to him.

IN the understanding of the average layman, and also of most members of the medical profession, the sole purpose of disease is to destroy and maim. Disease is regarded as an enemy, seeking always to devour and destroy whomsoever it can ensnare, with germs as its fifth column. It seems, superficially, that this is indeed the case with regard to the many and varied ailments that human flesh is subject to, but nothing could be farther from the truth when viewed from the Nature Cure standpoint.

It is the outstanding feature of the Naturopathic philosophy that it regards disease as having a definitely constructive purpose and meaning, and not a destructive one—a purpose and meaning beneficial to the sufferer, and not harmful to him. It is because Nature Cure treatment is based solely on this postulate that it is so effective in the cure of many cases given up as beyond hope by orthodox medicine. There is no other system of disease-treatment in existence which takes this seemingly most unusual view as to the part that disease plays in the economy of Nature, which, therefore, stamps Nature Cure as unique. Osteopaths, chiropractors, homoeopaths, herbalists, and other practitioners of unorthodox healing techniques may assert that their particular therapy cures disease, but while there is no denying the good work that they do, in no case do these particular forms of unorthodox healing regard disease itself in its true light. Therefore, they are unable to work in full co-operation with Nature in the eradication of ill-health, as does Nature Cure.

Often Confer Marked Benefit

Of course, in cases of injury, mechanical interference with the supply of blood, lymph, and nerve-force, hereditary taints and tendencies, etc., the beneficent role we have ascribed to disease does not apply. In such cases the unorthodox

therapies referred to often confer very marked benefit upon the sufferers, especially if they are used in conjunction with a Nature Cure regime.

It is in regard to disease in its simplest and more direct form—in acute disease—that we see the beneficial role of disease in its fullest operation. All acute diseases, such as fevers, colds, influenza, skin eruptions, inflammations, diarrhoea, etc., are efforts on the part of the inherent vital forces of the human body to throw out from the system the impurities accumulated through wrong habits of living, and in that way to bring about a restoration of normality. *Acute conditions can in no sense be regarded as inimical to the welfare of the sufferer, however violent and desperate they may seem.*

Acute diseases only become inimical to life when their constructive processes are blocked and thwarted by the administration of drugs, sera, etc. The deaths that ensue from such treatment are, of course, blamed on the disease and never on the treatment, which is the true culprit. When acute diseases are treated by Naturopathic methods, they always tend to clear up in the shortest possible time, and, what is most significant, leave none of the complications and sequelae which are so prone to occur as a result of the orthodox treatment of such conditions.

Until acute disease is viewed in the light ascribed to it by Nature Cure, i.e., as a move towards internal cleansing and a highly beneficial and constructive piece of work on the part of the body, the deaths, complications, and sequelae which attend the orthodox treatment of acute disease manifestations must continue, despite the lauded successes of orthodoxy generally.

But, even if we grant that acute disease is a move towards internal cleansing and self-purification on the part of a body clogged with impurities due to faulty habits of living, what about chronic disease? Can diseases such as cancer,

diabetes, arthritis, consumption, heart disease, and other such deadly and destructive maladies be viewed in the same light? Obviously, the situation is not quite the same here as with acute disease, simply because chronic disease is in itself the outcome of many years of suppression of former acute conditions by drug, sera, the knife, etc.

Under such suppressive treatment the superficial symptoms of the acute disorders disappear and a seeming return to normal health is achieved, but the impurities which the system was trying to throw off via the acute disease are thrown back into the deeper tissues of the body, plus the drugs, vaccines, etc., that have been employed. This disease suppression, continued over many years, plus the continuance of the faulty nutrition and other wrong habits of living of the patient (which were the cause of the acute disease manifestations in the first place), leads in time to the establishment of chronic disease.

An Attempt to Localize the Damage

Unlike acute disease, therefore, chronic disease cannot be regarded as a directly health-promoting process. Nevertheless, chronic disease is, fundamentally, a constructive and purposive process, albeit one of accommodation, because it represents the body's attempt to localize, as far as it can, the damage to normal functioning brought about by the presence of toxic encumbrances, when it is prevented from eliminating them by suppressive treatment. The toxic accumulation is relegated to any organ or tissue which is, for any reason, weaker than the rest of the organism (perhaps as a result of a hereditary tendency, former injury, etc.), and by setting up chronic disease in such a site the body hopes to be able to carry on the work of the system as a whole with the minimum of interference generally.

If the attempt at the localization of chronic disease is thwarted by still more suppressive drug and serum treatment, or by means of surgery, X-rays, radium, etc., then the chronic malady tends to become progressively more deeply ingrained in the system, even though, for a time, it may perhaps appear to have been changed in its outward expression (in seemingly successful cases) by the treatment employed.

Thus, the limited beneficial role of chronic disease is defeated, in time, by wrong treatment, just as the far more directly beneficial role of acute disease is thwarted. The last state of the patient is usually far more serious in every way than the first, and leads to the incurable conditions which medical science regards as hopeless. But even here, if Nature Cure methods are applied after years of disease suppression and wrong treatment, there is still hope of helping the patient back to some degree of health, because, natural therapy will help the body at last in the way it has for long been seeking vainly to help itself.

Where orthodox methods have continually interfered with its efforts at self-cleansing and internal purification, Nature Cure methods will co-operate fully with those efforts, and if there is sufficient inherent vitality left in the body of the patient, and changes have not been too destructive, there is no telling what may be achieved in due course, even in the most hopeless-seeming cases. That is why sufferers from cancer, tuberculosis, heart disease, kidney disease, arterio-sclerosis, arthritis, and others of the killing and crippling diseases have responded in a remarkable way to Nature Cure methods.

Thus, the constructive and beneficial character of disease is again emphasized, even in extreme cases, once methods are instituted that co-operate with the healing forces of the human body, because the treatment aids in the elimination of systemic impurities which, for many years, perhaps, the body has been vainly trying to throw out, with no co-operation on the part of either the patient or his medical adviser. Once such intelligent co-operation and understanding is forthcoming, via the establishment of a Nature Cure regime, the purpose of disease as a beneficial and constructive process is immediately manifest, even as we have said, in extreme and seemingly hopeless cases. In the latter, however, we can hope for but limited success, because of the factors already described. It is only when chronic disease is taken in the relatively early stages, and treated on Nature Cure lines, that its constructive and purposive role can be fully established, as is so clearly apparent in the case of acute disease.—*Health For All*, Sept. '50.

MEDICAL AND SCIENTIFIC APPROACH TO ALCOHOLISM

A PIONEER programme for the prevention and treatment of alcoholism on medical and scientific lines was outlined by a sub-committee of the W.H.O. Expert Panel on Mental Health, meeting in Geneva early in December 1950. According to this Expert Group, national public health administrations should provide treatment facilities and advisory, educational and other services in this field. It was emphasised that this outlook was quite different from the approach of lay reform groups, and must not be confused with political and social action against alcohol as such.

In an effort to clarify terminology the Committee proposed the following definition of alcoholism: "Any form of drinking which in its extent goes beyond the traditional and customary dietary use, or the ordinary compliance with the social drinking customs of the whole community concerned..." The Committee also agreed on a detailed description of three stages generally observed in clinical studies of the development of alcoholism. Each of these stages of "symptomatic drinking", "addictive drinking" and appearance of organic damage or psychic deterioration, has a different significance for prognosis and treatment.

Analysing the extent and nature of the problem from an international point of view, the experts agreed that the level of per capita drinking in a country is no concrete evidence of alcoholism. Similarly there is extreme variation in social drinking customs in different countries and in the types of beverages consumed. In some countries, urban life is associated with a higher rate of alcoholism, while in others the higher rate is to be found in rural communities. High alcoholic consumption may in one place be characteristic of upper-level socio-economic groups, while in another it is at its highest at the lower end of the scale.

The Committee accepted the following as being the best available estimates for each country of the total numbers of chronic alcoholics presenting complications: Switzerland 50,000; Chile 43,000; France 375,000; Yugoslavia 90,000; U.S.A. 945,000; Australia 34,300; Swe-

den 30,800; Italy 135,800; Norway 8,400; Finland 8,800; England and Wales 86,000. No figures are available for Asian countries.

In order to define the problem precisely the Committee urged the development of national statistics within every country on the incidence of alcoholism.

The numerical size of the groups affected underlined the need for adequate treatment facilities, according to W.H.O. experts. The Committee felt that all efforts should be made to bring to light early cases of alcoholism where treatment is at its most valuable and successful, and was of the firm opinion that outpatient dispensary services are necessary. Such services can in the early stages of the disorder produce a high proportion of successful results, and are best situated in well-equipped general hospitals, at very small cost.

As regards means of treatment, the W.H.O. experts felt that a medical approach devoid of any implications of moral censure, and backed by psychotherapy and social work would offer the best results.

It was pointed out that no existing drug is a cure for alcoholism. They were rather aids to treatment. Important new drugs such as tetra-ethyl-thiuram-disulphide, when used by qualified physicians are however a valuable aid in well-chosen cases. A strong warning against their use without specialist medical supervision was issued by the W.H.O. experts who pointed to several fatal cases.

Finally the Committee recommended that W.H.O. should take all steps within its power to stimulate national public health services to take positive action in preventing and treating alcoholism.—*W.H.O. Release* (Extract.)

[Note:—With the introduction of complete prohibition in some States in India and the introduction of partial prohibition in others, with the prospect of its extension in full in the near future, new kinds of dangers are rearing their ugly heads due to illicit distillation and the mixture of tinctures in drinks as substitutes. That such a

danger has become very real has now become widely known from the reports that have recently appeared in the Press. It has therefore become very necessary and urgent to take effective

and stringent measures to prevent such an evil spreading far and wide and seriously undermining the health of the people, by legislation and efficient supervision.—Eds.]

Energy Requirements of Adults

ANCEL KEYS, Ph.D.

It is a pity that the question of caloric requirement in the diet has been overshadowed by the question of requirements of other nutrients in the diet. Now again the pendulum of interest is beginning to return toward the older problems of calories. Though the appetite is a fairly accurate guide, yet a person may need guidance about calories especially in sickness.

Unit of measurement:—In medicine the customary unit of energy is the large calory or kilocalory which is defined as the amount of heat which will raise the temperature of a kilogram of water 1 degree from 15-16°C. In an ideal engine 1 calory will do 426.9 Kg M or 3087 foot-pounds of work. The dissipation of heat at the rate of 1 calory per minute in a perfect engine is equivalent to doing work at a rate of 0.0936 horse power (1 H.P.=33,000 foot pounds per minute). One gram of urinary nitrogen results from the combustion of about 6.25 Gm of protein, which is associated with the release of 28.5 calories, the use of 8.45 Gm. of oxygen and the production of 9.35 Gm. of carbon dioxide.

Basal metabolism:—It varies very little in normal persons. For adults of average size the basal metabolism accounts for something like 1600 calories per day in young men to perhaps 1100 calories in older women. Gross departures from these values are found in the presence of thyroid disturbances and in semistarvation. In famine victims and patients

with anorexia nervosa the total basal metabolism may be 40% below the normal.

Specific dynamic action:—The ingestion of a meal raises the resting metabolism to an extent which is variable, depending on the character and size of the meal. It may vary from 6-17% and on a general average may be taken to be 10% for all ordinary mixed diets. This energy is "lost" as heat and, presumably, is a pure waste in warm climate; in cold climates the heat of specific dynamic action may be a valuable adjunct in the maintenance of body temperature.

Physical activity:—This may increase the caloric requirement from 33-80%. In the heaviest forms of manual labour and sports the total daily expenditure may range upward from 5,000C.

Body size:—The body size is of major importance with regard to both basal metabolism and the cost of muscular activity. Although the basal metabolic rate is related to the body surface, a direct relation to the body weight is evident.

Climate:—Under hot conditions the activity tends to be curtailed to keep the body temperature within normal limits, while cold has the reverse effect. An allowance of 3% of the total metabolism should be provided for each 10 degrees difference in the mean external temperature.—Abstracted from the J.A.M.A. —The Medical Review of Reviews.

I used to wonder why people should be so fond of the company of their doctor, till I recollected that he is the only person with whom one dares to talk continually of oneself, without interruption, contradiction, or censure. —(Mrs. Hannah More.)

The Campaign for Food Hygiene

THE Central Council for Health Education did well to take the opportunity afforded by the organisers of the British Food Fair at Olympia to hold their one-day conference there on 31st August. It is nearly three years since the C.C.H.E.'s first conference on food and drink infections drew public attention to the increasing risk of poisoning amongst those who take their meals at communal eating places and to the imperative need for higher standards of hygiene and particularly personal cleanliness amongst both employers and employed in the catering industry. Consciousness of the dangers of alipheid methods and of inadequate equipment has certainly been aroused, but the number of outbreaks in 1949, reported by Professor G. S. Wilson as being more than double that of 1948, seems to indicate that there has been a genuine increase in these infections. Professor Wilson believes that this is so, in contrast with the decline in most other infections, and points out that nearly all food poisoning is bacterial in origin, about 40 per cent being due to infections mainly from the Salmonella group, about 20 per cent to toxins and about 40 per cent to non-specific organisms. He described temperature as the governing factor for the prevention of bacterial multiplication and, in summing up the general discussion, criticised the confusion between the relative values of safety and cleanliness in regard to foodstuffs. Dr. Betty Hobbs, of the Food Hygiene Laboratory at Colindale gave an excellent summary of her experience gained from personal investigation behind the scenes in many catering establishments, pin-pointing facilities for hand-washing, storage and refrigeration, and general design of kitchens, with special reference to washing-up arrangements. Incidentally she revealed that the Ministry of Food's Catering Trades Working Party, chaired by Sir William Savage, will issue a code of practice for those concerned by its report.

The practical responsibilities of local authorities were explored at the afternoon session. Dr. E. K. Macdonald, chairman of the C.C.H.E., led off with suggestions for action, "educative, exemplary, admonitory and penal." His

emphasis on under-used powers contained in the Food and Drugs Act, 1938, and the new Model By-laws led to subsequent interesting discussion on the question whether their wording was sufficiently specific for their purposes. Mr. H. A. Perry (C.S.I., Guildford) made a good case for the setting up of a Hygienic Food Traders' Guild of the type which his borough pioneered, but did not claim this method to be of universal application; other sanitary inspectors who spoke clearly thought that the active participation of their councils in such ventures might prejudice penal action against members of guilds, but the resolution of this question must await a test case. Mrs. J. R. Robins, speaking as a housewife, gave the most entertaining address on the programme, appealing to health educators to speak with one voice and in a language understandable to the simplest intelligence.

We have left out of its proper place mention of the third address in the morning session, that by Dr. Bernard Schlesinger, of Great Ormond Street, on gastro-enteritis in infancy. Whether or not this condition is actually a food and drink infection is not proven, but evidence is accumulating that it is conveyed by the same types of carelessness and faulty technique as food poisonings, and the speaker's emphasis on its cost in infant lives, almost entirely amongst artificially-fed children, created much attention. His recommended simple "drill" for mothers in preparing feeds deserves wide publicity.

This brief comment on a worth-while conference is not complete without reference to the really excellent stand devised by the C.C.H.E., and the Central Public Health Laboratory in the Food Fair itself. It tells the story of one family outbreak caused by infected duck egg in such a way that it introduces the elementary rules for prevention of all types of food infections. Lastly, the transparent woman, "Lumana," on loan from the German Museum of Hygiene (now in Cologne), tells the story of her body's internal workings in a pleasant English voice skilfully recorded. These exhibits have been seen by many

thousands of the general public during the course of the Food Fair with, we hope, lasting results. The reduction of food poisonings depends on the raising of hygienic standards amongst employers,

employed and the general public; and the keynote of the conference was that the public health service must go on hammering at the subject.—*The Medical Officer*, 9th September, 1950.

Improving Nursing Training in S. E. Asia

MISS OLIVE BAGGALLAY, chief of the Nursing Section at WHO Geneva Headquarters, left New Delhi on December 19, 1950, for Europe after a round of visits to Asian centres where WHO is assisting in efforts to improve nursing training facilities. The keynote of Miss Baggallay's impressions was that more and better training facilities were vitally necessary to counter the region-wide shortage of nurses which was crippling efforts to raise health standards especially in rural communities. Provision of additional certificate courses as well as diploma courses might help to raise nursing strength to the required level more rapidly. At present nursing was frequently but quite wrongly regarded as a menial profession, and the nurses status must be raised if her services were to be of maximum value in hospitals as well as in urban and rural public health work.

The WHO Expert Committee on Nursing at its first meeting earlier in the year 1950 recommended to all Governments to draw up a five-year plan for intensified recruitment of nurses and to make appropriate budget provisions. The Nursing Section of WHO is preparing a manual for the use of National Health Services in planning adequate nursing services in hospitals and in the public health field.—*WHO Release*.

[While public attention has been drawn to the paucity of nurses and intensified recruitment of nurses is recommended by the WHO Expert Committee, the Government of Madras find themselves unable to entertain all those undergoing training in their service. In a Press communique issued by them in regard to the demonstrations made by pupil nurses on December 29, 1950, they say: "There is no obligation on the part of the Government, who train the pupils at the cost of the

State, to entertain the pupils in service. The training, which is comprehensive and extends over a period of three and half years, has been so designed as to make the pupils fit to undertake nursing as a profession, after the training

" . . . Men and women are trained in nursing not merely to fill posts in Government Medical Institutions but to provide a steady flow of trained nurses for employment in hospitals, dispensaries and nursing homes run by local and private bodies and private individuals, including private medical practitioners. Whatever be the adequacy or otherwise of the nursing staff in Government Medical Institutions, any civilised Government is expected to train a larger number of nurses than can be employed in their own institutions. In response to complaints of paucity of trained nurses for employment in non-Government institutions and to meet the demands of the public for private nurses, the Government had arranged to train an additional number of 120 nurses in each batch, bringing the total strength of pupil nurses under training at any time to 739.

"Before the output of nurses was so increased, the numbers trained were just about adequate to meet the needs of government institutions and consequently almost every pupil was employed on contract service after the completion of the training, and later, on a regular basis. Now that Government are training larger numbers in each batch, in the interests of the public, there can be no question of absorbing all of them in Government service, without either throwing an additional burden on the tax-payers and increasing the requirements of trained nurses for non-Government institutions, or sending out nurses already in employ."

Topics from Medical and Health Periodicals

False testimonials.—Part of the swindling tactics of the big cigarette companies is the printing of testimonials from persons who are said to be users of their wares. Investigators of the Federal Trade Commission interviewed forty-three persons who had signed such documents. Some of them did not smoke at all, others were not able to read, and had signed the letters without having the contents read to them.

Correcting speech defects.—Speech handicaps reduce the earning power of an adult by approximately twenty five per-cent, yet only ten per cent of those thus afflicted are receiving the training and treatment necessary for improvement. This is pointed out by Dr. Wendell Johnson, of the University of Iowa, in the *Crippled Child Magazine* (Vol. 27, p. 13). A child with such a defect is frequently held back a full grade in grammar school by maladjustments stemming from this disability. The author estimates that between six and nine million persons in this country have speech handicaps. There is an acute shortage of personnel skilled in correcting these defects.—*Good Health*, (U.S.A.)

Blood pressure.—A statistical study of thousands of persons, published in the *Journal of the American Medical Association*, suggests that the arbitrary limits of "normal" blood pressure have been, as many physicians suspected, somewhat too arbitrary. Actually, the investigators found, readings usually considered above normal are not uncommon under the age of 40 and after 45 are even more frequent than some "normal" readings.

On the statistical basis, they figured that the normal range should include systolic or "pulse" pressure, at 16, of 105-135 for boys and 100-130 for girls, ranging up to 115-170 for men and 115-175 for women between 60 and 64 years old. " . . . In many persons at present termed hypertensive because of a blood pressure of 170 systolic and 90 diastolic or 160 systolic and 100 diastolic, these figures represent not a specific disease but merely the aging process, and therefore should not be a cause for alarm."—*Today's Health*.

Emotions affect the heart.—A symposium on cardiovascular diseases was published in the May, 1950, number of the *Medical Clinics of North America*. It contains contributions from twenty-five experts or groups of experts on various phases of disorders of the heart and blood vessels. It is almost all of a scientific nature, dealing with diagnosis and treatment. Only a single paper touches on what is perhaps to the public most important of all—prevention. This is entitled *The Relation of Life Stress to Cardiovascular Symptoms and Disease*. It was prepared by Dr. Iran P. Stevenson and associates, of Cornell. They call attention to the existence of circulatory symptoms without structural disease.

Emotional disturbances have been found to cause functional changes, both in well persons and those who have cardiovascular ailments. Heart rates of forty-eight individuals were recorded before and after they had been aroused to an excited state by discussing their life situations. The average rose from eighty to ninety-nine. Extremes of one hundred and thirty were observed. In other studies, it was shown that mental outbursts also brought on changes in the heart rhythm. Rise of blood pressure and constriction of kidney blood vessels also attended anxiety and resentment. On the other hand, slowing of the heart and fall in blood pressure were sometimes revealed in subjects who felt depressed and overwhelmed.

The most powerful curative agency has been shown to be the reassurance and emotional support which stems from the physician's interest, sympathy and willingness to stand by. It was also revealed that emotional disturbances caused the lining of the stomach, colon and nose to become engorged and red.—*Good Health*.

A famous surgeon and tobacco—The late Dr. Harvey Cushing may be regarded as a paradox. His fame as a brain surgeon was worldwide; his biography of Sir William Osler is a masterpiece; he gave his services most liberally for the benefit of his profession and mankind. Yet he was a slave to tobacco. He permitted it to give him much pain over the years, to interfere with his work, to send him to the hospital and perhaps to shorten his extremely useful life.

As told in his biography by Elizabeth H. Thompson (published by Henry Schuman, New York), his work on the battlefields of France in World War I was impeded by the weakness of his legs. Gradually they grew worse. "His excessive smoking had aggravated his circulatory difficulties, for the arteries of both legs were already permanently affected by ascending thrombosis." He was rarely free from pain and became irritable and short of patience. He was less able to endure the long hours at the operating table. Finally, gangrenous patches broke out on both legs. This condition, known as Buerger's disease, frequently makes necessary the amputation of a foot or part of a leg to prevent death. Six weeks in the hospital without tobacco and with a course of physical medicine helped him back on his feet.

In 1933, he had to return to the hospital with a peptic ulcer. This had been causing him pain over a year. He was in bed from September until the following March. Ulcers are more common among smokers than among abstainers. Just what part tobacco had in bringing on this ailment cannot be known. And his legs continued to bother him. By 1939, he began to have sharp pains around his heart. In October of that year, he died from heartblock. To what extent tobacco contributed to his death at sixty-nine will remain a mystery, but unquestionably smoking interfered materially with his labors which were such a great boon to humanity.—*Good Health* (U.S.A.)

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- DIET AND GOOD HEALTH—A POPULAR TREATISE ON THE FOOD QUESTION—By Dugald Semple.
- NATIVE DIET—WITH NUMEROUS PRACTICAL RECIPES—By Ettie A. Rout, 1926.
- THE CHILD'S DIET—By J. Sadler Curgenven, M.R.C.S. I.R.C.P., 1905.
- NUTRITIONAL FACTORS IN DISEASE—By William Robert Fearon, M.B., Sc.D., F.I.C., 1936.
- THE PRINCIPLES OF INFANT NUTRITION AND THEIR PRACTICAL APPLICATION—By K.H. Tallerman, M.D., (Cantab) M.A.C.P. (Lond.) & O.K.J. Hamilton B.M., (Oxon.), M.A.C.P. (Lond.), 1928.
- CHILD HEALTH via FOOD—By Rasmus Alsaker, M.D., First published, 1924.
- CLINICAL OBSERVATIONS ON INFANT FEEDING & NUTRITION—By Howard B. Gladstone, M.D., (Edin.), 1928.
- FOUR SIMPLE TALKS UPON THE LAWS OF HEALTH, PURE AIR, PURE FOOD AND PURE WATER—By Mr. C.P.V. Shunker, I.S.M.D., 1916.
- WHAT TO EAT AND HOW TO PREPARE IT—By Elizabeth A. Monaghan, 1922.
- A CHAPTER OF CHILD HEALTH—Clarke County and Athens Georgia, 1924-1928.
- BIBLIOGRAPHY OF NUTRITION IN INDIA—By N. Gangulee, C.I.E., Ph.D., 1940.
- THE PROBLEM CHILD AT HOME—A STUDY IN PARENT-CHILD RELATIONSHIPS—By Mary Buell Sayles.
- NOTES ON SANITATION FOR REGIMENTAL SANITARY ORDERLIES AND OTHER N. C.O's & MEN—By Asst. Surgeon V. J. Lopez I.S.M.D., 1912.

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