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GENERAL REMARKS

ON

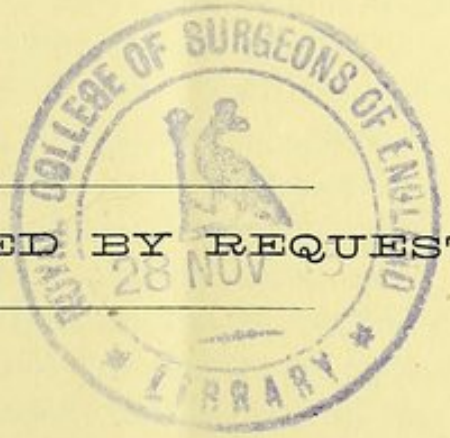
SANITATION.

LECTURE GIVEN AT THE BOARD SCHOOL ROOM, BOW, NORTH DEVON, ON JANUARY 4TH, 1888.

BY

RICHARD DAVY, M.B., F.R.S.E.,

Surgeon to the Westminster Hospital.



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1888.

What man is he that lusteth to live, and would fain see good days?
Keep thy tongue from evil, and thy lips that they speak no guile.
Eschew evil, and do good, seek peace, and ensue it.

GENERAL REMARKS ON SANITATION.

A LECTURE

Given at the Board School Room, Bow, North Devon,

BY RICHARD DAVY, M.B., F.R.S.E.,

Surgeon to the Westminster Hospital.

MR. CHAIRMAN, LADIES AND GENTLEMEN,—Having been asked by the Committee of our reading room to give a lecture this evening, I have accepted the duty with pleasure, and have chosen the subject of "Sanitation," as one that adds most materially to our happiness at this festive time and at all times, and as one of great interest to the physician, politician, and the people.

"Salus populi suprema lex," the safety of a people is the highest law; the law of self-preservation is observed by man and beast, so that it would be natural to suppose that any law of general and individual application must accentuate itself, if applied to the community; so it is, for the true progress of sanitation and civilisation increases the value of human life, and the nearer we approach perfection in sanitary wisdom, the further off we banish the portals of death. The most natural essentials for the preservation of good health are :—

1. Good food ; air, meat and drink.
2. Good habitation, cleanliness.
3. Good clothing.
4. Good occupation.
5. Good recreation.

1. *Good food; air, meat and drink.*—We are surrounded with air, acting as a food as well as a garment. Atmospheric air is composed of two gases, nitrogen and oxygen, about four-fifths of nitrogen, one-fifth of oxygen. This cloud of air envelopes the earth, surrounding it for forty-five miles. Its pressure on our bodies amounts to fifteen pounds weight to the square inch, yet so evenly balanced, as not to be felt. The universality of air pressure is one great means of support to our feeble frames.

The following experiments show that the air possesses weight. If an open glass have its mouth covered over with bladder, no external pressure will be apparent, because there is a resistance of the air within, just equal to the pressure of the air outside; but if the air be then extracted from under the covering by means of an air pump, the bladder is seen sinking down from the weight of the air over it, until at last it bursts inwards with a loud report. The pressure of the atmosphere is also well exhibited by placing the hand down upon the mouth of a glass, so as to cover it closely, and then extracting the air from the vessel, when the weight of the atmosphere holds the hand down upon the mouth of the glass with a force which soon becomes painful. A man of ordinary stature is exposed to about fourteen tons of this pressure, but as the air permeates the whole body, and presses equally in all directions, no inconvenience is felt.

> "Internal balancing external force,
> Remove the external, and to atoms torn,
> Our dissipated limbs would strew the earth;
> Remove the internal, in a moment crushed,
> By greater weight of the incumbent air,
> Than rocks by fabled giants ever thrown."

Air is the stuff we breathe; and breathing is the one common act we perform during our lives, sleeping or waking. Its presence is the best evidence of life in this world: it is the baby's scream; its absence is the best evidence of death: it is the silent gasp. The act of breathing consists in a circulating blood receiving oxygen

from the air, and giving carbonic acid back, the oxygen vitalising our tissues, the carbonic acid being utilised by the trees; so there is no waste, and here we notice an argument in favour of vegetation around our homes; for our exhaled breath is taken up as nourishment by plants, the carbon being fixed in them as carbonaceous growth.

Another most important law must here be noticed, viz.: the diffusion of gases. Professor Graham's law is that "the rate of diffusion of gases is inversely proportional to the square root of their densities." Two fluids may be brought into contact, *oil and water*, and no admixture takes place; but no two gases can be brought together without diffusion, and that in order and in obedience to law. This law of diffusion has a most important bearing on ventilation, all gaseous matter (when set free) commingling with the grand atmospheric cloud. The air is also the happy medium for equalising the temperature of the body, and so acts as clothing.

When the air is warm (60° to 70° Fahr.) we are warm and comfortable; if the air drops to freezing, or rises to summer heat, we make artificial amends by clothing, exercise, or fires, or leave off clothing or fires; either in winter roasting our bodies before the fire and wrapping up warm; or in summer adopting the fashions of paradise, or trying, as Sidney Smith puts it, to sit in our bones.

In England, our early knowledge of ventilation was stimulated by a scientific essay from the pen of Hales, the Rector of Teddington, in which he states, "Two gallons of air breathed to and fro for two minutes and a half, become unfit for respiration." Hales' essay was published in 1733, and became the means of drawing attention to the putrid atmosphere of ships, hospitals and jails; great and energetic reforms followed; then, naturally, the ventilation of private houses assumed importance.

Seeing, then, the importance of air and *temperate air*, here in Devon we can ensure plenty of it; and I have yet to learn a better or more practical form of good ventilation than that of *open* windows or doors, mellowed by large open

fires, according to good taste; a system involving no extra expense, and open alike to rich and poor. The chimney corner seat by the side of a cottage hearth is in a well ventilated position, and is a resting place of acknowledged serenity; every cottager in Devon here possesses his wide, wholesome health resort, a luxury unknown to the dweller in towns, or its reality represented by some shadowy subterfuge.

Let us now pass on to consider the subjects of meat and drink. As our bodies are principally formed of water, albumen, fibrine, gelatine, fat, phosphate of lime, salt and iron, these ingredients must be taken as food; *most* of these compounds are perfected for our use from the vegetable world; one food, the most natural and simple of all, *milk*, being secreted by special animal agency; the subject of water and milk will be gone into more fully under the head of drinks.

For the support of our bodies, *corn* may be taken as "the staff of life," containing albumen, fibrine, phosphates, &c., in a fit state for absorption. Bread is a most adulterated article of diet in the present day; good wholesome bread ought to be much cheaper than it is now, with wheat at 34s. a quarter; the baker must be yet doing a profitable trade. The sour smelling potato and alum mixture may be light and white, yet it compares most unfavourably with the old-fashioned nutty-brown, sweet, farmhouse loaf. In my opinion, many of the cases of rickets, defective teeth and other bone diseases, are very much due to children eating impure and nasty bread. Parents should therefore insist upon getting pure, unadulterated, whole-meal corn loaves for the nursery, for a white and light loaf will rear up a white and light child. Baking and brewing, unfortunately, have been too much delegated to tradesmen; I should be glad to see both of these arts practically resumed by the housekeepers of Great Britain. The fewer hands that your provisions pass through, the fewer are the chances of adulteration; hence, the importance of reducing railway rates throughout Great Britain, so that the town

consumer may deal direct with the agricultural producer, and the weekly hamper of provisions from the country may become a recognised institution, instead of the custom being prohibited by the ridiculously high tariff levied by railway companies—another instance of the fallacy of protection, as compared with the blessings of free trade. Taking the egg as an illustration of albumen, its value as an article of diet can hardly be over-estimated, yet the foreigner is again to the front, by reason of the prohibitive rates of our insular carriage. Many millions of eggs reach London annually from the Continent. I have never yet seen an ordinary hen that could lay an egg worth more than a penny, but fabulous geese, and evidently the gair fowl, can beat this estimate, for on Dec. 13th, 1887, Mr. Stevens, at his auction rooms, sold an egg of the great auk for £168 0s. 0d.

Alcidæ—Auks.

This bird is from two to two and a half feet long, inhabits arctic regions, and is becoming extinct. In the water, like the penguins, it is exceedingly active. It lives on fish. There is a stuffed specimen in South Kensington Museum of Natural History.

It seems to be a pity that this fowl only lays one egg; if you should come across one, mind that you poach it and sell the shell, for the box is worth more than its contents.

All meats should be good in quantity and quality. A good old-fashioned proverb says, "Enough is a feast, and more is a waste." The rich too frequently err on the side of *over quantity*, the poor on that of *under quality*, for it is a fact that rich and poor alike labour during life for one grand organ, universally an observant creditor, the belly. These foods need to be water, albuminous material, mineral and metallic elements (lime and iron) and hydro-carbons, such as rice, potatoes, starch, sugar, oil and fats. As a rule, everyone eats and drinks more than is necessary—custom complies too far in this line—"Come in and have something," is in every one's mouth. The schoolboy's ideal of happiness is in having a good blow out. The young officer

delights in a tall drink—the old thank God for a belly full. Our London Mansion House dinners are successes, because far too much food is pleasantly tucked in; so that aldermanic stomachs are proverbial in capacity, and John Bull is accredited as having more belly than brains. Amongst working men, much of the food they eat loses half its value by improper cooking, or improper selection. The working man's bread must be good, meat juicy, pastry digestible, vegetables fresh, surroundings clean. You can no more expect an engine to work without good coal than a labourer to do a good day's work without a good day's food; and my advice to any working man in this room who may be contemplating matrimony is to "make love to the good plain cook rather than to the pretty housemaid." Remember that it is right to present wholesome food in a wholesome tasteful manner, and, to my mind, good cookery management should be agreeable to *all* our senses, from the sound of the dinner gong or cheery clatter of the knife in the frying pan, to the last mouthful of food and its final digestion. Knowledge is now the means of dispelling one disease from amongst us, viz., *gout;* the rational man declining to follow the old custom of drinking port or beer to excess; an improvement not only advantageous to the individual, but also to his successors; for gout is pre-eminently a sample of disease in which the sins of the fathers are visited on the children.

We must now pass on to speak of drink as food. The most natural drinks are *milk* and *water.*

Milk.—This fluid is the only one capable of sustaining life for any length of time by itself, as evidenced at birth and during the early months of infancy—how great then is the importance of having it sweet, pure and good. In hospital practice we envy the country children and adults, who can get pure milk, and who are within touch of the first giver—a good cow—and who can buy it first hand from the farmer. In large towns, milk, having passed through many hands, each of whom have their pickings, is retailed at fivepence a quart; and then it is fortunate to have escaped

chalk and water. Modern investigation as to the cause of disease has proven that milk (so-called and so distributed in towns, it is a gross libel on pure milk) is a conveyancer of scarlet fever and typhoid—the germs of these diseases being introduced by impure water and neglect of cleanliness. No punishment is too severe for the agents who perpetrate these foul adulterations; sanitary science will yet reckon more justly in its infliction; for our best hopes for the control of disease now-a-days rest on prevention. What a gauntlet this pure and simple drink has to run! to steer clear of the pump, the poisoned well, the chalk pits, the defunct brains of animals, and the dirty hands of Christians—speaking plainly, what an innocent fool anyone must be to purchase a dose of typhoid fever at the rate of fivepence a quart! and what an awful blackguard the man must be who knowingly sells the same for profit!

A grand reform in the agricultural mode of doing business is now wanted, whereby the town consumer can have his goods direct from the country producer without the intervention of any middleman, excepting the carrier—hence the necessity for the radical readjustment of railway accommodation and railway rates. This subject is already a political one, and will have to be settled by the people. This direct dealing of town with country would benefit alike rich and poor, for though expense might not affect the one, purity affects both, and infants of both classes particularly.

Now for a few words on *water*. Since the bulk of our bodies are made up of water (the blood consists of 790 parts of water in every 1,000), and since cholera, typhoid fever, goitre, ague, paralysis, and stone in the bladder, are notoriously associated with impure water; we ought to recognise the full importance of every one receiving pure water. Every town ought to be alive to the urgency of a good water supply; our American cousins have a grand engineering water scheme for New York; Glasgow fetches her supply forty miles from the Lake of Fair Ellen's Isle (Loch

Katrine); Bow (thanks to the generosity of the late Mr. Packer) draws her supply from Searson; Crediton from us at Clannaborough—each one of us knows with what generally good result. Briefly, the qualities of good water consist in its being colourless, tasteless, inodorous, neutral, non-inflammable* liquid, which, on evaporation, leaves no trace of residue. All natural waters are impure, though not harmful, their order of purity being—rain water, water from melting ice or snow, river and lake water, ordinary spring and well water, sea and mineral waters. Hard and soft waters depend upon the presence or absence of carbonate of lime; water is hard if it contains more than ten grains per gallon; soft, if less than ten grains of carbonate of lime per gallon. Animal impurities consist of those contaminations derived from animals or men, containing non-specific or specific infection—Ἄριστον μέν ὕδωρ, the good advice of Pindar, is the advice that I would offer to the thoughtful working men of to-day.

I must here state my opinion on the subject of alcohol as a drink. Personally, I trust myself to be *too temperate* to be a total abstainer, and I dislike extremes in any fashion. But looking at the liquor traffic, as I find it in Great Britain, it is, in my judgment, the greatest curse of these islands, and may truly be styled *mater miseriæ*—the mother of misery. Fully two-thirds of the accidents admitted into the Westminster Hospital are directly or indirectly caused by intemperance, and our most vital organs are ruined by structural changes induced by repeated doses of this alcohol—cases of which are never absent from our medical wards. About 130 millions sterling are spent annually in drink in this country. Poverty abounds, and so do gin palaces. Princes' Street (under the shadow of our hospital) consists on one side of eighteen houses, five of which are gin and beer shops. Let us yet recall the well-known

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* At a spring, up stream Niagara, the visitor may dip water in a tumbler, examine and drink it; then strike a match and set fire to what is left in the tumbler.

verse in the Proverbs—"Wine is a mocker, strong drink is raging: and whosoever is deceived thereby is *not wise.*"

The nineteenth century experience bears out the ancient one, and emphasizes it, for in those days the mysteries of fusel oil were unknown, and the fortifyings and blendings of the merchant were in their infancy. This drink traffic is injurious to agriculture and to trade. A poor man who gives threepence for a pint of beer, has not one-tenth part of the nourishment derived from a threepenny loaf. What becomes of the remaining nine-tenths? £100 spent in boots and shoes employs double the labour that £100 spent in liquor does. If half the money now expended on drink were spent on articles *necessary* for the people, a great impulse would be given to trade and labour, and there would be less "complaining in our streets." For the working man, the taking of a glass of *good* beer or cider with his food, must be left to his own discretion; but the intemperate should know (whether rich or poor) that by eating or drinking to excess, they eat and drink their own destruction.

2. *Good habitation.*—The most important of all dwellings is "*the house we live in,*" and here will be a proper time to speak of personal cleanliness, both of mind and body. "*Orandum est, ut sit mens sana in corpore sano.*" A healthy soul in a healthy body. The connection is so close, as to have originated the proverb "*Cleanliness is next to godliness.*" The outward and visible sign of personal cleanliness is a clean skin. Let me tell you a thing or two about our skin. It is one of the largest, most exposed, and most important organs of the body. The sweat glands of the skin are estimated at 2.381, 248 in number, and present an evaporating surface of eight square miles, as many as 3,528 are found as opening into one square inch in the palm of the hand. No sebaceous glands are found in the palm of the hand or sole of the foot. The weight of cutaneous exhalation from one person is about 2½lbs. daily.

I have on the wall a diagram of the constituent parts of

healthy skin. Washing with soap and water not only adds to personal appearance and comfort, but also by opening the pores of the skin permits the excretion of sweat, regulates temperature by promoting proper circulation, and removes scales of epiderm that have done their duty, the retention of which does harm.

How frequently do we see *dirt and disease* associated. Parasites will not live on a healthy clean skin; cholera will not spread in a sanitary district; fevers cannot revel their foul sway in pure quarters; and how within the last twenty years has the practice of surgery and surgical operations advanced by reason of strict attention to cleanliness!

A good house should be sheltered from wind, of southern aspect, of fair elevation, properly ventilated, free from damp, well supplied with water, and remote from any decomposing agents. By one of the quaint topsy turvies of time (guided by human knowledge), the county prison which used to be the haunt of typhus (goal fever), has become the model of sanitary architecture and perfected associations. The prisoner is regular in his lying down and rising up, in matters of exercise, in simplicity yet wholesomeness of food; he is free from the inclemency of weather and the temptations of the pot house; he is under paid medical care, and lives in a grand establishment; even with the loss of *character and freedom* he gains health, and has a higher expectation of life. Unhappy and unhealthy homes foster *crime;* hence the marked improvement in many prisoners on entering and leaving jail. Co-operation is doing much now towards improving the homes of working honest men; and I believe that one of the greatest benefits that could be granted to the artisans would be to encourage (on business lines) the erection of co-operative homes, and so permit each working man to be the possessor of his own suite of rooms (freehold), a security that ought to be cheaply and readily convertible into coin, stimulating the working bee towards thrift, easing his neck from the crying millstone of per-

petual rent, and advancing his individual independence. What more repulsive combinations can we see than the rookeries in town, the haunts of poverty, squalor, unwholesomeness and disease, and what an exorbitant rent is levied on these poor for such quarters! Talk about bad landlordism in Ireland—

> "O fortunati minium, sua si bona NO RINT,
> Agricolæ!"

As a Londoner I will shew you much worse landlordism within a mile of Westminster Palace, than any you can name in Ireland.

The housing of the poor in London and other large towns is a necessity that will soon come yet more to the front, as well as the better housing of the cottager and farm labourer. Landlords ought not to shirk responsibility, either in town or country. Even now, what a farce it is for medical officers of health to preach sanitation, and throw the burden of maintaining sewers upon tenants, and not upon the ground landlord!

No landlord or owner of ground rents should be allowed to contract himself out of the erection of all drainage works on land let out for habitation purposes; and I would insist, also, on the water supply mains being carried out at his expense, and not at the tenants. How can London be really sanitary on fair terms, if the legal authorities are all badgering the temporary tenants for permanent improvements, instead of the permanent landlord?

Is it right that water, an essential for human life and cleanliness, should be made the subject of private speculation? The due supply of water and drains ought to be provided by the landlord, and the medical officer of health should prosecute the landlord for neglect of structural drains or want of good water, and not persecute the tenant. *One word more on sewage.* Where water can be had in unlimited quantity, it may properly be used for sanitary purposes in drains; but, in Devon, personally I am in favour of the dry earth system, and I can speak of its advantages after twenty years' experience of the

same. The plan is a sanitary one, and the manure is valuable. Why should the farmer pay for shipload after shipload of guano from the other end of the world, and waste the excrement of the towns of his own land? The cottager may readily avail himself of this system of true economy for his garden. Some of you may have forgotten the verses in the xxiii. chapter of Deuteronomy:—"Thou shalt have a place also without the camp, whither thou shalt go forth abroad—and thou shalt have a paddle upon thy weapon, and it shall be, when thou wilt ease thyself abroad, thou shalt dig therewith, and shalt turn back and cover that which cometh from thee." So the authority for rendering back to the earth what had been taken from her is no new one.

Disinfectants are of service in medical and surgical practice, but are not much to be relied upon when used unskilfully; fresh air, and the destruction of all decomposing matters by *fire*, are the best disinfectants for you to use. Cremation is taking foothold in Great Britain by reason of its extreme cleanliness. On frequent occasions the surgeon has occasion to bless the fire that purifieth.

Home—a word full of joy, brimful of associations, pregnant with goodness, to be worthy of its name, must be clean—provided that the home is proportionate to the purse of the owner, every home can be clean and happy; the pretty cottage, with its cultured garden and cleanly surroundings, is as much a worthy object for contented manliness, and a promoter of healthful life, as the regal castle with its imposing park and finished excellence. Both should be fit examples of taste and circumstance. I would advise all, from the labourer to the artisan, from the artisan to the professional man, to work and be their own landlords; many will fail, but the honest attempt will engender thrift and sobriety, and will frame a way ere long for increased and greatly wanted increased facilities for the purchase of land, on which each one may plant his home and rightly enjoy the fruits of his own labour.

I will here acknowledge the many valuable hints that I

have received from Dr. Benjamin Richardson, F.R.S., in preparing this essay; his hand directs the most fertile pen in our profession, and if time allowed, I would sketch an outline of his "Hygeiopolis," or "City of Health." I have presented a copy of this work to our reading room, and you can peruse Dr. B. Richardson's ingenious plan at your future leisure.

3. *Good clothing.*—I will only offer a few remarks on the subject of clothing, and those more from a sanitary point of view than general, because women are a much better judge of these matters than men.

In my opinion, in our treacherous climate every one should wear flannel next to their skin, and so prevent disease by protecting the chest. Flannel is not only a non-conductor, but also an absorbent clothing, preventing perspiration acting as a wet sheet. Naturally, dress varies according to the season of the year, and is properly left, as to selection, in the power of the wearer. Children, however, should always be warmly clad, especially over their face, arms, and legs. The nakedness of the extremities amongst English young boys and girls ought to be remedied. For adults, light, clean, cool clothing in summer, and warm, comfortable, coloured garments in winter, are to be recommended. Waterproof capes are good in rainy times, and especially beneficial against wind; no covering beats a loose waterproof coat for driving home in, after a day's shooting or any prolonged exertion; for colds are got not during the time of exercise, but afterwards, when the bodily functions are enervated and depressed in consequence of exhaustion. There is no danger in plunging into a cool stream when sweating in summer, provided that friction and thorough drying with a towel takes place at once; but the danger consists in bathing, after perspiration has ceased, and consequent depression of the circulation has ensued. I cannot leave the subject of clothing without firing a shot at that marvellous form of *hat*, yet worn by the mashers and gentility, and known to us as the *box hat*. I could name one or two museum specimens of the *box hat* in

our own neighbourhood; the worst one I have ever seen (off the stage) hangs up at Culliford. This head-gear is accustomed to do duty at births, deaths, and marriages, wherever indeed there is a shine on, there is your shining *box hat* on also; like the gout, the *box hat* is intensely disagreeable, yet a grievous mark of respectability. In old fashioned London I have tried hard to leave off the *box hat*, but professional etiquette gained the day, and perforce I must yet wear one; "*it looks so bad without it*," says one, and "*You must do as others do*," says another. So the fetish exists, prince and peasant alike concurring that the most unsuitable head-gear for our climate is the most suitable; whoever reforms radically this badge of slavish custom will do the state service and will deserve a life pension and death statue; so please, gentlemen, never laugh at the eccentricities of any female bonnet, until the beam is out of your own eye, and the *box hat* out of your own collection.

Tight gloves, tight lacing, and tight boots are all abominable and wrong, nor have they the merit of being graceful. Many a fee have I taken as the result of wearing tight boots; and many more are in course of incubation; the only justifiable tight boot for us all is the water-tight, and lucky one is to have them.

Bearing closely on the subject of clothing is the question of wearing beards. I am an advocate for all men wearing beards. Hair has been placed on the chin by Nature (who exhibits design in all she does) for a beneficient end. As our eyebrows defend the eyes from sweat, so does the beard the chest. It is a protection to the mouth, lips, chin, neck, and throat, and far from being dirty, is Nature's protection against dirt and dust. The barbarous system of shaving not only removes hair, but also the skin covering; hence the blue and bleeding colour of the face that has been operated on. The beard performs the same function to the neck and chest, as the tuft of hair at the horse's fetlock; it is the water shoot which conducts moisture from the hoof. Hair is the cleanest garment (so far as removing dry mud is concerned) that any man or beast can wear. We notice

how clean a foxhound (after a dirty run) is, the next morning. The hound comes in, lies down, licks himself dry, and gets warm, then shakes himself and is presentable at breakfast. No other jacket that he could wear would permit this excepting hair. Moreover, all the apertures of our body, and surfaces especially prone to dirt and moisture are surrounded with hair, partly for warmth as well as for cleanliness.

4. *Good occupation.*—It is curious to observe how occupations influence mortality. Inn-keepers have the highest mortality amongst men; clergymen of the Church of England and barristers the lowest; drapers have a higher mortality than grocers, due probably to a closer atmosphere, suspending more fluff and dust, circumstances conducive to chest complaints.

Dr. Richardson's arrangement of vitalities from Dr. Wm. Farr's tables.

1. Barristers.
2. Clergymen of the Established Church.
3. Protestant ministers.
4. Grocers.
5. Gamekeepers.
6. Farmers.
7. Civil engineers.
8. Booksellers.
9. Wheelwrights.
10. Carpenters, joiners and labourers.
11. Bankers.
12. Domestic servants.
13. Sawyers.
14. Paper manufacturers.
15. Blacksmiths.
16. Tanners and shoemakers.
17. Bakers.
18. Tin and lead workers.
19. Schoolmasters and lawyers.
20. Millers and Roman Catholic priests.
21. Watchmakers.
22. Tobacco manufacturers.
23. Doctors and surgeons.
24. Porters, coachmakers, and ropemakers.
25. Drapers.
26. Chemists and commercial travellers.
27. Butchers.
28. Carvers and gilders.
29. Farriers.
30. Printers and bookbinders.
31. Fishmongers.
32. Plumbers and painters.
33. Railway servants.
34. Tool and file manufacturers.
35. Hatters and needle manufacturers.
36. Hairdressers.
37. Carmen and carriers, horse-keepers and grooms.
38. Cabmen.
39. Earthenware manufacturers.
40. Publicans.

You might suppose that doctors lives are good ones, but, "*Physician heal thyself*" is advice much yet needed in our

own profession. The mortality of doctors is high; this is due to an anxious and dangerous education; long yet uncertain hours, excitement, responsibility, and struggle with death for life; so that whoever enters our profession, sacrifices a certain prospect of vitality, as compared with other professions, in compensation for the benefits it is his high and noble privilege to confer on his fellow-men. The ease of a parson's life is proverbial; he exists in a protected atmosphere amid conditions of mental and bodily refinement; with lofty and soothing associations. The publican's shortness of life is accounted for by the temptations to swallow the drug which he dispenses to the public. I am not ashamed to say that, in my opinion, the majority of publicans are sinners, both to themselves and the public; nor am I afraid to say that the greatest sinners are the successive Governments, who blink at the drink customs, licensing the trade and trousering the proceeds—their motto is, "Hang the law, but hang on to the profits."

Work, however, is the lot of all; "by the sweat of his brow shall a man eat bread"; it is a natural and health-giving legacy bequeathed to us all—it is beneficial, if maintained within reasonable limits—and necessary, for the support of each and all.

All play and no work,
Gives Jack a ragged shirt.
But all work and no play,
Makes Jack a dull boy.

And this brings me to my last heading, viz.:—

5. *Good recreation.*—One universal natural recreation is sleep—eight to nine hours should be given to sleep, and more than that to those whose employment is enervating or hard. Competition now-a-days is very keen, and little heads have to be stuffed with much learning; examinations have to be passed, anxieties encountered, success or failure to be faced. There is too much credit given in the present day to examinations; examinations at best find out what a man does *not know*—a boy's life history, his character, his good points, his antecedents are not weighed nor credited for;

they ought to be, and I have always allowed so many marks for general quality, antecedent to an examination, wherever and whenever such information can be gained. Women, again, not content in *sharing* men's joys and sorrows, absolutely *compete* with them for the prizes offered. So, here we are, men, women, boys and girls, pushing and driving for some short-lived pet object of our ambition. Neither boys nor men can stand long this overpressure. They look for recreation—they love holidays. Now, games are too frequently tasks on the mind and body—whist, billiards, chess, athletics, may all be instanced, as good recreations degenerated by excess into hard work—by overstrain, or over ambition, or conceit of super-excellence.

Holiday consists in *novelty*—change of occupation is as good as a holiday—each man has his own fad or desire of recreation, and within fair limit, this is right both in work and play. A townsman takes his holiday in the country, a countryman has a week's fling in the town—both from choice—the land lubber has a month's sea voyage, the sailor spends a month on shore—enjoying themselves, *for a change.* All recreations should be simple, innocent, varied, and appropriate. Temperance should be practised as much in sport as in realities.

An open game in an open field for boys and girls ; gardening for older children ; foreign travel for men and women ; seaside residences, as opposed to inland life ; are good examples of wholesome recreation. *Health* is *wealth*, true of an individual, true of a nation ; without health, wealth is nothing. The poor man's health is of higher value than the rich man's wealth. Health is God's gift, more to be desired than gold, yea, than much fine gold.

To-night, I have endeavoured to aim at truth, rather than to say things generally acceptable to all. Exercise your own judgment on your own health and well-being. Every countryman can enjoy good air, good meat and drink, good occupation and a good home, the essentials of happiness ; the so-called luxuries of life are frequently mis-

fortunes; misfortune is a maid so easily wooed and won, that she must not be courted. While scorning the dull submission of men towards abuses and wrong, none of us are quite stript of the gifts of merciful nature, nor forbidden the seeking after good health and full enjoyment of a wise, manly, healthful contentment. And now, let me wish you all a happy New Year; happier, I trust, for those who had a bad year last; and happiest for all, in realising the universal blessings of "health and wealth," both of body and soul.

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