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# PUBLIC HEALTH MAGAZINE.

Vol. I.]

FEBRUARY, 1876.

[No. 8.

## Original Communications.

### HOUSE AND SEWER VENTILATION.

(A paper read before the Citizens' Public Health Association.)

BY ROBERT T. GODFREY, M. D., PROFESSOR OF HYGIENE  
AND PUBLIC HEALTH, MCGILL UNIVERSITY.

Any person possessing the sense of smell must admit that, on entering any of the houses in this city, the air they contain is far from being as pure as it ought to be. This remark applies particularly to our hotels and public buildings, and, unfortunately for some of their residents, they may contain some of the most poisonous gases, which cannot be detected by the sense of smell; and this cause of danger may be diffused by a slight crack or chink in any of the drain pipes. The principal cause of this existing evil is the fact that at present none of our pipes, sewers, or drains are ventilated. The tile pipe runs from the street sewer into the house, a four inch soil pipe is connected with this; the poisonous gases being lighter than the atmosphere ascend in the pipe, and are constantly escaping through the house. The only way to remedy this evil is to have a ventilating pipe attached to the highest part of this drain pipe and carried directly through the roof.\* The pipe is simple in its construction, and one that could be put up at a small cost. When we consider the lightness of this gas, we will perceive that it is always trying to escape at the highest point, consequently all

\*Here the doctor exhibited a ventilating pipe, (manufactured by Messrs. Gordon & Egan, Plumbers, of St. Catherine street).

the foul air in the drains is being pressed up into our houses. This fact can be easily demonstrated by merely lifting up the handle of the closet, and, although there is an S or bend, yet the air is forced up as the water rushes down the pipe. When we consider this poisonous state of the air in our houses we need not be surprised when we see typhoid fever (which is called by many eminent physicians water-closet fever), scarlatina, measles, &c., so prevalent as they are at present in our city. For the houses that are already built, the plan of ventilating the sewers seems to me to be the most simple and successful, but to those who are about to build, I should suggest an entire change from the present system adopted in this country. The plan that I would recommend is the flat roof, with the pitch to the centre, the drain or spout being carried in a straight line down through the centre of the house. It will be seen at a glance that the rain and snow water will keep the sewers constantly flushed out and free from all impurities. This shaft, or drain, answers as a natural ventilator, and never permits any foul air to be disseminated through the building. Again, there are no bends or traps necessary for the closets, as they open in a straight line into the drain. The advantage of this must be very obvious, for, as the upright drain acts as a chimney, it not only clears itself of every noxious vapour, but acts as a ventilator to every room that has an opening into it. While speaking upon this subject, I will say a word or two on flat roofs. I know that many of my fellow-citizens have a great objection to the gravel roof, as it is called, and I admit that a roof of this description, badly constructed, is a perfect pest. I speak from experience, for I believe I was one of the first in Montreal to adopt a flat roof on a private dwelling. There is nothing original in them, for they have been used from time immemorial, nor is there anything new in valley or central drainage roofs, for they have been in use for a very long period in New York; but, I believe Mr. James Shearer was the first to introduce them into Montreal. This flat roof will always be a failure, unless it is thoroughly ventilated underneath, so that the lower part can be completely chilled, for, should the hot air from the rooms come in contact with the under surface, it will thaw the snow and ice, and tear the roof, allowing the water to stream in from

every crack. Then, with the flat roof, between the ceiling beams should be deafened and openings allowed in the cornice, so that a free current of air may constantly pass under the roof. I may add that a roof properly constructed in this way ought to last for forty years without repair. I have to apologize for occupying so much of your time about the flat roof, but you will perceive that it is intimately connected with the system of drainage that I advise, and I recommend it with confidence, not only to every private individual about to build a house for himself, or for others, but also to the corporation. While speaking of our city Fathers, there is one improvement we want, and that is, an efficient and intelligent inspector of buildings for this city, and for this post, an experienced architect, and one acquainted with the laws of public health would be the proper person. If sufficient authority were given to such an officer, he could see that such a simple, cheap, and effectual system of ventilation and drainage was carried out as would ensure the health of every citizen in this our fair city, or of any stranger sojourning amongst us.

For the last few years Montreal has done a great deal towards the efficient drainage of the city, and our present plan, which I carefully examined many years ago, is, in my opinion, as perfect and as well adapted to the wants of Montreal as can be devised. The present work being done on the east end of Craig street is a carrying out of a portion of the main plan, which, when completed, will leave us in possession of a system of drainage that will enable us to say we have the best drained city on the continent. But, Mr. President, the best system that was ever invented, the greatest amount of cleanliness ever practised by the most industrious of housewives, will not ensure us safety from zymotic or contagious diseases, until our sewers are properly ventilated. The plan I bring before the meeting of the Association this evening is efficient as well as economical. The only originality I claim on this subject is the combination of the several principles; that is to say the flat roof with central direct drainage; the closets opening without traps into the upright chimney or drain; and one of the most essential requisites is that a free current of cold air (in winter) should be allowed to pass uninterruptedly under every flat roof. Such a building I erected five years ago

and it has answered my most sanguine expectations. I believe Mr. Brown, the architect, after several trials now universally adopts it.

Before closing my remarks I should like to say a word or two on house ventilation ; and I would here bring under your notice, a model of a house furnace patented by Mr. Ryan, of Victoria Square, and such a one as my own house is heated by. The cold air enters at the bottom, passes through the furnace pipes, is heated and brought in contact with the steam from boiling water, where it absorbs sufficient moisture, and any oxygen it may have been deprived of passes up through the building, and the foul air is allowed to escape through the man hole of the roof, the cover of which can be raised by a ratchet to the required height, according to the temperature of the weather. Before concluding, Mr. President and gentlemen, accept my thanks for the patient hearing you have given me.

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SHORT SANITARY PAPERS FROM THE "SANITARY REVIEW."

BY DR. ALFRED J. H. CRESPI.

(Continued from page 165.)

NO. IV.

Those who assume the heavy responsibilities of becoming the fathers and mothers of families lay themselves under solemn obligations to those whom they call into existence, to say nothing of the duty under which every man lies of not marrying, if he knows that he is suffering from diseases certain to be transmitted to his offspring. Providence does not rain children down on married people, and there may be circumstances when prudential motives should influence their conduct in a matter with which prudence is supposed to have little to do.

No law can prevent the victims of consumption or of hereditary insanity from marrying, though, as long as such marriages are common, the effects on the welfare of the world must be disastrous. But prudential motives might have great weight in

making such marriages rare. More than enough is talked of the duties of children to parents; the other side of the question is often carefully concealed from sight. It seems to me that the duties of a parent to his children are tenfold as onerous as those of the latter to the former. His influence for good or evil over his offspring is enormous; theirs over him for many years insignificant. He can always ruin or injure their body and soul; they can rarely do much to cause him suffering; at least, not until their habits and opinions are acquiring strength. But let him not forget that as he trains the twig so will the tree incline. The opinions he implants in his children, the habits he allows them to form, will be in nine cases out of ten their habits and opinions through life.

The truth is that a parent fails signally, scandalously, unpardonably, in his duty to his children, if he does not train them up so as to fit them for this world as well as the next, if he does not enable them to enjoy life, and to be calm and hopeful when death approaches; no one can be the latter who looks back on a blighted existence.

To me it is sickening to hear fathers talk of the blessing and the duty of resignation to the will of God, and of the necessity of teaching children pure morality, when in their own lives they have persistently failed to show their faith by their works. The Christian religion teaches a man to labor while strength lasts; it commands him to prepare himself for the next world, not by pretending to hold certain dogmas and creeds, but by so living that in his actions he shows forth the spirit of his God. How, I ask, can ill-educated and diseased children do the work of life? The negligence and folly of parents and teachers make many a man unfit for the struggle before him. When such a person dies, whether early or late he leaves an empty place, which it had never been in his power properly to fill.

Long life should not be the object of existence, but every man should try to live well. No parent should wish to prepare his child for a career of idleness and luxury. He should esteem it his noblest gift to his offspring to fit him for living well, usefully, and therefore happily. But how can he pretend to give this training unless he knows something of the laws of health?

These are not days when children will honor their parents unless the latter have striven to do their duty. There can be no holier sight than to see an aged father surrounded by a circle of proud and affectionate children, who in the full bloom of manhood remind him of what he was thirty or forty years before, when it was June not November with him. There is no spectacle more distressing than to look on men and women whose tottering feet are pausing on the brink of an unhonored grave. Their children with neglected minds, evil passions, and unhealthy bodies, stand indifferently around, thinking to themselves that they have reason to despise the unhappy beings who gave them birth, and who failed to train them up properly. It is hard to decide whether the old man, who has wasted his life, squandered his opportunities, failed in his duty to his offspring, or the neglected ill-trained, unhappy, diseased children, are the more pitiable. Fortunately, He who has to judge cannot go wrong, and His rewards and punishments will be tempered with justice and mercy.

#### No. V.

Few seem aware how easily some of the blessings, which careful attention to and patient study of the laws of health have it in their power to confer, can be brought within the reach of all classes. Better days are coming. Before long some fruit will reward the patient and disinterested labors of the hundreds of medical and scientific men, now earnestly at work trying to prevent what can so seldom be cured.

Were curative medicine a strong and sure defence it would still be far easier to prevent suffering than to call in the resources of the physician's art to restore health which ought never to have been endangered. But since curative measures are generally uncertain, and only delude those who rely on them, it becomes ten times more important to call in the assistance of that noble branch of medicine which appears to have boundless power for good, and which, when carried wisely into practice, is almost free from any admixture of evil.

In the splendid triumphs of preventive medicine in the past is a promise of what the future will certainly bring. In the lessened mortality, the longer and healthier lives—the pri-

vilage of some classes at the present day—are proofs that those are not dreamers who permit themselves to hope that, in a couple of centuries, there will be a marked diminution in the amount of sickness, and that then the duration of the working period of life will be materially longer than now. In that brighter future death will oftener be the result of a gradual decay of the bodily powers, and men and women will enjoy a more vigorous life, a more peaceful and happy old age than now. Do not these rewards justify attention to the wonderful science of health?

No. VI.

Briefly to recapitulate : these short papers have not answered the end I had before me in writing them, if they have not drawn the attention of the reader to the following important facts ; that it is far easier to prevent than to cure ; that curative medicine—understanding by that term medicine and surgery—is powerless for good, except in those cases when nature alone would have been sufficient, if not to ensure recovery, at least to place the sufferer on the high road to recovery ; that sanitary science, in its broadest and most scientific signification, deals with the training of the mind as well as with that of the body ; or, in other words, that no system of education is deserving of the name which does not concern itself with the body as well as with the mind ; that the prospects of sanitary science are brilliant ; and, lastly, that some knowledge of this science is indispensable to every man who takes upon himself the charge of a family. Fortunately it is not difficult to learn something of the structure of the body, its functions, its dependence on the mind ; but that knowledge requires to be practical, not merely theoretical. In all cases in which such knowledge is reliable, and is allowed to influence national manners and customs, the standard of health will assuredly rise : as it rises, the average period during which men and women are able to exert themselves strenuously and happily will be in like degree extended. Let all who have the charge of children or of workpeople, all whose opinions and example influence the conduct of others, try to hasten the advent of that time when, in a sense never yet true, man will live in a state of nature.



## Sanitary Reports.

MORTALITY OF THE CITY AND SUBURBS OF  
MONTREAL, FOR THE YEAR 1875.

CLASS.	ORDER.	DISEASES.	Total by Sex.		Total both Sexes.
			Male.	Female.	
I. ZYMOTIC.	I. Miasmatic.	1. Small Pox.....			
		2. Measles.....			
		3. Scarlatina.....			
		4. Diphtheria.....			
		5. Quinsy.....			
		6. Croup.....			
		7. Whooping Cough.....			
		8. Typhoid Fever, (Infantile Remittent Fever)			
		9. Typhus, and Infantile Fever.....			
		10. Relapsing Fever.....			
		11. Continued Fever.....			
		12. Erysipelas.....			
		13. Metria, (Puerperal Fever).....			
		14. Carbuncle.....			
		15. Influenza.....	1,038	1,101	2,139
		16. Dysentery.....			
		17. Diarrhœa.....			
		18. Cholera Infantum.....			
		19. Cholera.....			
		20. Ague.....			
		21. Remittent Fever.....			
		22. Cerebro-Spinal Meningitis.....			
II. CONSTITUTIONAL.	II. Diathetic. Entothic	1. Syphilis.....			
		2. Hydrophobia.....	2	1	3
		3. Glanders.....			
		1. Privation.....			
III. Diætic. Entothic	Alcoholism	2. Purpura and Scurvy.....			
		3. Delirium Tremens.....	3	2	5
		4. Intemperance.....			
		1. Thrush.....	3	1	4
IV. Parasitic.	I. Diathetic.	2. Worms, &c.....			
		1. Gout.....			
		2. Rheumatism.....			
		3. Dropsy and Anæmia.....			
		4. Cancer.....	71	85	156
		5. Noma (or Canker).....			
		6. Mortification.....			
		1. Scrofula.....			
		2. Tabes Mesenterica.....	273	303	576
		3. Phthisis (Cons. of Lungs).....			
4. Hydrocephalus.....					
Carried forward.....			1,390	1,493	2,883

## MORTALITY OF THE CITY AND SUBURBS OF MONTREAL.—(Con).

CLASS.	ORDER.	DISEASES.	Total by Sex.		Total both Sexes.
			Male.	Female.	
		<i>Brought forward</i> . . . . .	1,390	1,493	2,883
III. LOCAL.	II. Or- gans of Cir- culation.	I. Cephalitis . . . . .	314	246	560
		2. Apoplexy . . . . .			
		3. Paralysis . . . . .			
		4. Insanity . . . . .			
		5. Chorea . . . . .			
		6. Epilepsy . . . . .			
		7. Tetanus . . . . .			
		8. Convulsions . . . . .			
	9. Other Brain diseases, &c. . . . .	75	66	141	
	1. Carditis, Pericarditis and Ende Carditis . . . . .				
	2. Aneurism . . . . .				
	3. Other Heart diseases, &c. . . . .	242	163	405	
	III. Respiratory Organs.				1. Epistaxis . . . . .
	2. Laryngitis and Tracheitis . . . . .				
	3. Bronchitis . . . . .				
4. Pleurisy . . . . .					
5. Pneumonia . . . . .					
6. Asthma . . . . .					
7. Other Lung diseases, &c. . . . .	110	113	223		
IV. Organs of Digestion.				1. Gastritis . . . . .	
				2. Enteritis . . . . .	
				3. Peritonitis . . . . .	
				4. Ascites . . . . .	
				5. Ulceration of Intestines . . . . .	
				6. Hernia . . . . .	
				7. Ileus and Intussusception . . . . .	
				8. Stricture of Intestines . . . . .	
				9. Fistula . . . . .	
				10. Stomach Diseases, &c. . . . .	
				11. Pancreas Diseases, &c. . . . .	
				12. Hepatitis . . . . .	
				13. Jaundice . . . . .	
				14. Liver Disease, &c. . . . .	
	15. Spleen Disease, &c. . . . .				
V. Urinary Organs.	1. Nephritis . . . . .	31	13	44	
	2. Ischuria . . . . .				
	3. Nephria (Bright's Disease) . . . . .				
	4. Diabetes . . . . .				
	5. Calculus, (Gravel, &c) . . . . .				
	6. Cystitis and Cystorrhœa . . . . .				
	7. Stricture . . . . .				
	8. Kidney Disease, &c. . . . .				
VI. Ge- n- erative Organs	1. Ovarian Disease . . . . .	...	6	6	
	2. Disease of Uterus, &c. . . . .				
VII. Or- gans of Loco- motion	1. Arthritis . . . . .	7	..	7	
	2. Joint Disease, &c. . . . .				
		<i>Carried over</i> . . . . .	2,169	2,100	4,269

## MORTALITY OF THE CITY AND SUBURBS OF MONTREAL. (Con.)

CLASS.	ORDER.	DISEASES.	Total by Sex.		Total both Sexes.	
			Male.	Female.		
		<i>Brought over</i> .....	2,169	2,100	4,269	
V. VIOLENT DEATHS. IV. Developmental Diseases	VIII. Integumentary System.	1. Phlegmon.....				
		2. Ulcer.....	9	4	13	
		3. Skin Diseases, &c.....				
	I. Of Children.	1. Stillborn.....		860	816	1,676
		2. Premature Birth and Infantile Debility.....				
		3. Cyanosis.....				
		4. Spina Bifida and other Malformation.....				
		5. During Dentition.....				
	II. Of Women	1. Paramenia.....			9	9
		2. Childbirth.....				
	III. Old People.	1. Old Age.....		70.	111	181
	IV. Of Nutrition.	1. Fractures, Contusions, Wounds.....				
		2. Burns and Scalds.....				
		3. Poison.....				
		4. Drowning.....				
		5. Otherwise.....				
	I. Accidents or Negligence.	1. Murder, Manslaughter.....				
		2. Execution.....				
	III. San. educ.	1. Wounds.....		127	36	163
		2. Poison.....				
3. Drowning.....						
4. Otherwise.....						
IV.	1. Chirurgici.....					
Total.....			3,235	3,076	6,311	

## FORIEGN HEALTH STATISTICS.

United Kingdom of Great Britain, during four weeks ending Nov. 6th, 21,717 births and 14,203 deaths were registered in London and twenty other large towns, and the natural increase of the population was 7,514. The mortality from all causes was, per 1,000. In London, 23; Edinburgh, 20.50; Glasgow, 21.50; Dublin, 24.75; Portsmouth, 27; Norwich, 20.75; Wolverhampton, 20.75; Sunderland, 22.25; Sheffield, 21.50; Birmingham, 22.75; Bristol, 26.75; Liverpool, 25.75; Salford, 32.50; Oldham, 27.50; Bradford, 30.25; Leeds, 28.75; Hull, 26; Newcastle-upon-Tyne, 23.25; Leicester, 23.50; Manchester, 28.25; Nottingham, 29.25.

Other foreign cities, at most recent dates, per 1,000: Paris, 23 (typhoid fever, 32); Rome, 29; Vienna, 22 (small-pox, 8, scarlet fever, 11); Brussels, 19 (typhoid fever, 5); Berlin, 27 (diphtheria, 27, typhus fever, 21); Hamburg, 21; Calcutta, 35 (cholera 16); Bombay, 26 (cholera 24); Madras, 41 (cholera 77); Amsterdam, 27; Rotterdam, 28; The Hague, 28; Christiana, 23 (scarlet fever, 11); Breslau, 21; Buda Pesth, 35 (small-pox, 5); Turin, 24 (diphtheria, 6); Alexandria, 32; Florence, 34; Copenhagen, 17; Munich, 32; Naples, 25 typhus fever, 5, small-pox, 5).—*The Sanitarian*.

## Correspondence.

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### A FEW WORDS ABOUT THE MONTREAL DRAINS.

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*To the Editor of the Public Health Magazine :—*

DEAR SIR.—Unfortunately it is only when there is an alarming increase in the death rate that the subject of drainage receives the attention it deserves, as one of the proximate causes of mortality when in a defective state. But this spasmodic way of dealing with it has the fault common to all subjects handled in a hasty and disjointed manner. The Craig street tunnel, which everybody has come to believe to be the one thing needful in this connection, has taken deep root in the popular mind, while, to an impartial inquirer, it appears to have nothing to recommend it beyond the desire to have a big tunnel.

The splendid success which has attended the Metropolitan Drainage Works of London, with which most of our citizens are to some extent familiar, has induced many to believe that the system carried out there should be followed exactly here. A moment's consideration will shew us that the two cases are not parallel. In London, where the river is tidal, it was found by experiment that the sewage, ebbing and flowing with the current, did not advance more than one mile in its course to the mouth of the river each tide, or say two miles in twenty-four hours. Hence the necessity for discharging at a low point, where the possibility of its returning to the city is prevented by large and costly reservoirs, which are constructed to hold the sewage back till half-ebb tide—the best time for discharging.

How different with us in the St. Lawrence, where we have an average current of four miles an hour *always from us*, so that whatever might be thrown into it would travel near one hundred miles in twenty-four hours—or at all events would be as

far as Lake St. Peter in the same time that the sewage of London would occupy in going over two miles.

Besides, in our case, observations extending over several years shew us that the river does not fall more than two feet per mile between Montreal and Longue Pointe, when the least possible grade required for a main sewer is five feet per mile, it is easy to see that any extension eastwards can only be got *below the level of the river*, which would give us practically an elongated cesspool, whose contents could only be displaced by further supplies of sewage forcing it out until equilibrium was restored, when the sewer would have no *capacity for discharge at all*. When this will have been discovered, how will the citizens regard a project for ripping up the Craig street tunnel a *second time* to carry out measures which might have been acted on from the first?

Furthermore, the injurious effects produced upon the river water by town drainage is not nearly so formidable as most people are apt to imagine. The Thames receives about 156 millions of gallons of sewage independent of the rainfall every twenty-four hours, while the total quantity of water discharged by the river is about 1,560 millions of gallons; the liquid is therefore at the outlet composed of one-tenth sewage, which is considered sufficiently diluted to be harmless.

We discharge six millions of gallons of sewage into the St. Lawrence, which hurries seaward about 78,000 millions of gallons every twenty-four hours when at its lowest level, so that one gallon of our sewage, which is not by any means so dirty as is commonly supposed, has about 13,000 times its volume of clean water to carry it off.

Is it worth while to spend \$200,000 to get, say 20,000 gallons to mix a gallon of sewage with?

These are one or two of the many points which are worth considering on this all important question.

I am,

Yours, &c.,

JOSEPH SMITH, C.E.

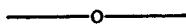
## Rebivtus.

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THE CHOLERA EPEDMIC of 1873 in the United States.  
Government Printing Office, Washington, 1875.

This volume is a report made by order of the President, in accordance with a joint resolution of the U. S. Senate and House of Representatives. Were the revenues of nations always so beneficially applied, we should hear fewer complaints with regard to their expenditure. The task of reporting fell on Dr. Woodworth, who called to his assistance Dr. E. McClellan, U. S. A., Dr. Peters, of New York, and Dr. J. S. Billings, U.S.A. These, and other authorities, have laid the medical profession, and the public generally, under deep obligations for the valuable evidence collected and the facts which have been arranged. Acting on the advice that "prevention is better than cure," the specific objects sought by this inquiry were, how is Cholera propagated and disseminated? What are the conditions most favorable to its spread? What, up to the present time, has been found the best means of preventing, or arresting, its devastation? And what treatment has been most successful in combating its attacks? The investigation extended to 130 infected localities, and was conducted mainly by correspondence. Amongst those who furnished the facts, we find some of the most eminent medical practitioners in the several districts. The value of the report is enhanced by the introduction of maps, showing the course taken by this terrible epidemic in various countries, and at different periods, together with plans of towns and districts, exhibiting the portions in which the disease raged, and the quarters which enjoyed immunity. The old ærial theory of Cholera transmission is "blown to the winds," whilst its extension by the "diarrhœal-tick, foul clothes, utensils, privies and the food and water contaminated by them," is clearly

established. In the treatment of the disease, there appears to be very little new, but the suggestions made, especially those by Dr. Nedswetsky, may be found to be of great value, indeed some practical experiments in the use of the mineral acids appear strongly to favor his opinions. There is a Cholera Bibliography containing a list of some thousands of volumes and pamphlets, already published. They are here very usefully classified. The addition of one volume to such a mass would seem to be of little importance, and yet we venture to say that this one will be of more practical use than a considerable portion of those which have preceded it. The facts collected are striking, their arrangement good, and the lessons to be drawn from them clearly shown.



CANADIAN MECHANICS' MAGAZINE. Edited by F. M. Boxer, and published by the Burland-Desbarats Lithographic Co.

This is a monthly publication deserving of liberal support. It is the only one of the sort in Montreal. Its want has been long felt, and we must say it amply supplies that want. It is filled with photo-lithographs, most beautifully executed, such as the "Interior of the Royal Aquarium;" "Fulton Ferry House, N.Y.;" "Proposed Hospital at Stockton," "Gumpel's Patent Rudder;" "Allan's Floating Cabin," and many others of interest. Leading articles on home industry. "British North American Boundary Commission," "The Hercules Screw Proppers," "Improved Emery Grinding Machine," and a host of valuable information for those actively engaged in mechanical trades and manufactories. We heartily recommend it to the public for support.

# PUBLIC HEALTH MAGAZINE,

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FEBRUARY, 1876.

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## A FEW HINTS ON THE HYGIENIC MANAGEMENT OF THE INDIVIDUAL.

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That well-known axiom cannot be quoted too often, "that a large and healthy population is the life and strength of a nation, and the source of its success in science, art, agriculture, and commerce."

If our political economists could only be taught to understand that the enactment of stringent laws for the well-being of our large towns and thickly populated districts, would yield by far a richer return than all the auriferous veins of the far west, it would be a blessing.

If our corporations were compelled to keep our streets from being cesspools, and have more stringent watch over our courts and yards, where hundreds are inhaling a pestiferous atmosphere, our mortality list would not only be lessened, but those who have survived would grow stronger, generation after generation, instead of weakening the bone and sinew of the present rising generation, by allowing them to live over hot beds of malaria.

Let model lodging houses be erected on proper hygienic principles, and we should see a population growing up in vigorous strength and able to compete with their neighbors, in both physical and moral culture. Many a man has been driven from home to the resorts of ruin, because he felt the misery of his dwelling and its surroundings, and from the abodes of vice he speedily finds his way to the hospitals, or the prison.

The fact of its being impossible for us to get on without the aid of all classes combining in the general progress of society, ought to make us mindful in a special degree of that portion of the com-



munity to which we are daily beholden for our most ordinary comforts, and they have an undoubted claim upon us to be protected from preventable diseases.

We do not intend to give any very elaborate statistical information, for we cannot, owing to the fact that the new law of the Local Legislature is not in working order yet, but in the course of publication we shall make use of those of the old country, but briefly and only as they may apply to our own cities, which are advancing in population and manufactories, slowly but successfully. They are necessary to touch upon also as furnishing information which, if attended to, would certainly lead to the saving of life.

In the unhealthy districts of some large manufacturing towns not less than one-third, and even a greater proportion, of the children ushered into this world never see the fifth anniversary of their natal day, and the question may well be asked: What is the cause? Simply this, the unhealthy condition of the dwelling houses of the poorer classes, the unjustifiable use of stimulants, drugs, and quack medicines, containing opium, the prejudices, neglect, and ignorance of nurses and mothers, and other preventable causes. Dr. Lanner says, that so directly is infant life influenced by bad or good treatment, that less than a century ago, the London workhouses presented the almost incredible result of 23 deaths in every 24 infants under one year of age, and this was allowed to go on for some time, till a parliamentary inquiry brought it to light, and then means were taken to send the infant poor to be farmed in the country, and at suitable distances from town. The result was, that the death rate in one year was reduced from 2,600 to 450 a year.—Obtained from the *Lancet* of 1835 and 1836.

Disease and untimely death result not from necessity or from chance, or accident, but really from the infringement of those laws and conditions, on the due observance of which the Creator has decreed, that the health and welfare of the various organs of the body shall depend. As surely as we make sanitary improvements, so certainly will our yearly death rate diminish, and that of infancy in particular. The principal laws for the preservation of infant health are very simple. Pure air, cleanliness, suitable

clothing, with plain and natural diet, will go a long way towards health and vigor, while suitable medical interference will aid the *vis medicatrix nature* in overcoming the diseases which may be inevitable. We are aware that it is not an uncommon thing for the minister and physician to be consulted about the bringing up of the young child, when just ushered into this trying world, so that a few general directions will not be out of place. Let us proceed to consider the first of the three epochs of Hypocrate's "Infancy and Childhood," but it is essential primarily to give a few cursory remarks upon the maternal hygienic management which all important matter is greatly neglected. And we may make one general remark, that on a subject like the present our readers must be prepared to enter upon the most homely details as well as the simplest remedies, to be reminded of commonplace remarks and apparently household nostrums, but they must be neither above the one nor too fastidious about the other; for health is sustained by attention to the simplest laws of nature and secured by just attention to the same.

Therefore we shall begin by taking up the diet of the pregnant woman. This should be simple, light, nutritious, adapted to the digestion of the individual. Tea and coffee should be sparingly used; highly seasoned dishes should be avoided; alcoholic stimulants are quite unnecessary. A foolish idea is prevalent that an unusually large quantity of food is necessary to the support of the mother and growth of the fœtus, and the result is, that from a plain, nourishing diet, the woman uses a full, generous one, and eats on principle, immoderately. This error is to be avoided, for plethora, debility, dyspepsia, nausea, heart-burn, water-brash will surely follow, with constitutional feebleness to the infant. We do not mean to say that the mother is not to satisfy her hunger, but only to use plain nourishing food in moderation, for a too sparing diet is as objectionable as the former, resulting as in the case of the poorer classes who suffer from the want of good nourishing food, in an enfeebled offspring, which die from scrofula, or tuberculous affections. The peculiar cravings often complained of are not to be satisfied by foods in large quantities, and should not be indulged in

by the mothers. Here, judicious advice to use self-control is important. These cravings, or longings, as they are called, can be dispelled by gentle laxatives.

The clothing should be warm and comfortable. Tight lacing especially should be avoided, as deforming the mother and injurious to the embryo, contracting the liver, impeding circulation, and causing other ills too numerous to mention.

The origin of the word "Enceinte" may serve to show that the Roman ladies were wiser in their generation, for on the occurrence of pregnancy the tight girdle or "cincture" was discontinued, hence the pregnant woman was said to be *incincta*, or unbound.

Cleanliness, as the old adage says, should come next to godliness at any time, but more especially during pregnancy. Sponging in tepid water will add greatly to the comfort of the woman, soothing nervous excitement, preventing constipation of the internal viscera, and promoting a healthy action of the skin.

Exercise in walking should be taken daily, but not to fatigue, especially at the latter months. Dancing, riding on horseback, or any violent exercise should be avoided. Keep good hours; keep the bedroom well ventilated, so that pure fresh air may be inhaled constantly.

If a mother wishes her offspring to have healthy active minds, she must regulate her mental constitution as carefully as she would her bodily health, always endeavoring to be calm and cheerful, governing her feelings and affections, overcoming all ill-regulated desires and fancies, and looking forward to the result in hope and confidence, never allowing despondency to take hold of the mind, but keeping it always occupied in judicious reading or household work, and avoiding strong mental emotion, such as grief, anger or despair. All exciting amusements should be forbidden. Bad or even serious news should not be mentioned to her, for all these things may produce convulsions in both mother and child.

We mention these few facts to shew that the power of the mental condition of the mother affects the offspring.

During the siege of Landau, in 1793, Baron Larrey relates

that of 92 children born in the district soon after, 16 died at the moment of birth, 33 languished for from 8 to 10 months and then died, 8 became idiots and died before five years, 2 were born with several bones broken. So that 59 children out of 92 died from the misery and anxiety the mothers underwent.

Hobbes, the philosopher, relates that before he was born his mother evinced so much concern at the reported approach of the Spanish armada that she was prematurely delivered, and he attributes this as the cause of his extreme nervous timidity.

On the same principle, James I. of England is said to have inherited constitutional nervousness owing to the fact that Queen Mary was pregnant at the time of her persecution, and also to the bloody murder of Rizzio in her presence. Many other instances might be brought forward to shew the absolute necessity of keeping the mother's mind as free from excitement as possible.

A more perfectly helpless picture of weakness cannot be found than an infant at its birth, and if left to itself it would soon perish. But killing with kindness is as dangerous, when the over-anxious mother, or the too officious nurse, doses the infant with castor oil, manna, butter and honey. These ingredients may be all very well in their way, but are totally unnecessary to the child, for nature has endowed the mother's milk with properties which cause everything to move forward gradually in a natural way.

Besides it is the first step towards that pernicious habit of domestic drugging, which cannot be too highly reprobated, and which no sensible man should sanction.

In considering the food of the infant, you must remember that the chief alimentary principles by which all the higher animals are nourished, may be divided chemically into four great groups. I. The Aqueous; II. The Saccharine; III. The Albuminous; and IV. The Oleaginous.

The principles may be variously represented or combined, forming new principles, but not altering their essential composition.

Now according to the principles of our bodies, the waste must be supplied by such diet as will cause the renewal of all the different substances of which our frame is composed, and there is only one diet which will effectually perform this for an infant, and that is *Milk*.

There is no doubt that milk, and milk alone, is the proper diet for the first few months of infantile life; in fact, until the milk teeth have been cut.

After dentition has been accomplished, we commence gradually to change the diet, from pure milk, to bread and milk, and oatmeal porridge,—that nutritious diet that has made the hardy Scotchman—nourishing broths, light puddings, arrowroot, &c. Avoid the bon-bons of the confectioner, which are particularly injurious, being colored with poisons. These instructions may at first sight appear trifling, but they are really the only directions that, if followed, will make healthy children. As a general rule, tea, coffee, wine and beer, should be interdicted; milk, pure or with water, or pure water, or toast water, is far more nourishing.

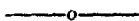
Cleanliness is of the utmost importance, at any stage of life, but especially so during infancy and childhood, for if the all-important functions of the skin are stopped up, then we have general constitutional disturbance. Hence, frequent and thorough ablutions, with gentle friction, must be performed, to maintain a healthy action of the cutaneous surface. As old Dr. Graham used to say: "Plenty of milk and plenty of water, makes a fine baby."

The temperature of the water, in winter, should be from 90° to 96° fahrenheit, and in summer from 80° to 85° fahrenheit; cold water for infants is cruel in the extreme, and quite indefensible as far as health is concerned, for it is known to have produced very ill effects. Another important part of cleanliness is the removal of all damp clothing immediately. The use of a little powder of starch, or a preparation of calamine and oxide of lead prevents and relieves irritation and excoriation. Let physicians and wise men say what they may, the clothing of infants will always be modified by fashion and caprices of parents; but so long as it is loose, simple, scrupulously clean,

warm, soft, capable of being fastened on without pins, and not too heavy, we need not be particular as to shape. The long flowing robes of the first few months of infant life, are at all events desirable, for they keep the cold air and draughts from the feet and legs of infants, which unintentional care might not be bestowed if it were not the fashion.

The old maxim, "keep the head cold, and the feet warm," should be kept constantly in mind; with regard to material, cotton is better than linen, especially in this extreme climate of ours, as the former is a better radiator and worse conductor of heat, and does not absorb moisture to the same amount.

Of all predisposing causes of disease, there is none more powerful than cold. So the foolish fallacy of exposing the chest on the plea of hardening the constitution, is absurd to say the least of it; so, in few words, let the clothing be warm, large enough to cover the whole person, including the chest, arms and neck, and sufficiently large to allow of perfect freedom of motion, exercise and sleep.



#### MORTALITY OF THE CITY AND SUBURBS OF MONTREAL, FOR THE YEAR 1875.

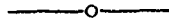
We are glad to be able so early to give our readers this city's mortality, but we are grieved to see that the hand of death has been so very severe. With all the advantages with which nature has provided us we cannot blame her. Who, then, is to blame? We answer without fear of contradiction, that we are culpably *negligent* in almost every particular connected with sanitation. By sanitation we refer not only to our sewers and streets proper, but to the general hygienic management of the individuals and houses in which we live. Then, also, we neglect to use those precautions which science has proved are the best protections against disease. Small-pox has committed serious ravages amongst us, especially among the French-Canadians, 653 of that nationality alone having been carried to untimely graves by neglecting the best of protection—"vaccination." Oh, Drs. Coderre & Co.,

what have you not to answer for? Is it not proof enough to see last year's mortality from this disease alone to shew how fallacious are your arguments? The total number of deaths from this disease alone has been 784. Out of this number 653 were French-Canadians; 103 British-Canadians; 2 Irish; 4 English; 4 Scotch; 18 from other countries, comprising 384 males and 400 females. For convenience, we have divided the whole mortality under the following 16 heads: The number having died from miasmatic diseases was 2,139; from enthetic, 3; dietetic, 5; parasitic, 4; diathetic, 156; tubercular, 576; nervous system, 560; organs of circulation, 141; organs of respiration, 405; digestive organs, 223; urinary organs, 44; generative organs, 6; organs of locomotion, 7; integumentary system, 13; developmental diseases of children, women, and old people, 1676; and from violent deaths, 163; total, 6,311. If our readers will look back to the table under the heading "Sanitary Reports," they will see what diseases are classed under each heading. If space had allowed, we would have placed the number of deaths from each disease opposite the respective diseases. We will quote from the inaugural address, which is unfortunately as applicable this last year as it was in reference to the year 1874, with this difference, that there are only 432 deaths less this year than in 1874.

- "The ratio of mortality in Montreal—ranging from 35 to 42 per 1,000—is larger than New York—larger than Baltimore—larger than Cincinnati—larger than Chicago—larger than St. Louis—larger than New Orleans—larger than Toronto—larger than Quebec—larger than St. John, N. B.—larger than Halifax, in fine, larger than in any city in North America. Yet Montreal is more favorably circumstanced in many respects than are those cities. Why, then, this large ratio of mortality in a city built neither on a marsh, a fen, or a quagmire; but on a gently undulating hill side, with its rocky bed, leading to a large, rapid, and beautifully clear stream of purest water? Why this enormous mortality, when in the surrounding country the estimated death rate ranges from eight to fourteen per 1,000? Not, certainly, to general climatic influences. The sun pours down his invigorating rays upon us, as he does upon the residents of other

cities, East, West, North and South of us; and the soil gives forth no miasmata in our neighborhood, as it does in the vicinity of many other places where the death-rate does not equal ours. The water which we drink rivals that of any other city in the world in purity and translucency; and yet we die, and die in larger numbers than a mere casual observer would be disposed to believe.

“The causes of this large mortality are various. Some of them may be common to many cities; but others are peculiarly our own. We may share with other towns in the evils that seem inseparable from large numbers of persons being congregated together within a given area, but we, in Montreal, exhibit a pre-eminence in large mortuary statistics which other cities, even in their jealousy, will not dispute with us. If men and women die elsewhere, with us they are killed. The wholesale slaughter of the innocents—to give it no milder term—is truly appalling. By one disease or another, preventable or unpreventable, six thousand seven hundred and sixty-three persons now die in the city and surrounding municipalities annually; so that whatever advances are being made in material prosperity (and they are sufficient to satisfy the desires of worthy ambition), those advances are harassed and disturbed, *pari passu*, by the death-rate.”



## MORTUARY STATISTICS OF TORONTO.

In the *Sanitary Journal* for January, the mortality for the City of Toronto in 1875 is recorded. It amounts to a total of 1,815. This, estimating the population at 70,000, gives a percentage of nearly 26 per 1,000. Of this number 630 were of children under one year; 370 are from diseases of the lungs; diarrhœa, 160; typhoid fever, 42; scarlatina, 23; measles, 17; diphtheria, 10; erysipelas, 9; small-pox, 10; diseases of the brain, 78; old age, 97. The classification is, as the editor says, not as complete as it might; but this is a very difficult subject to handle properly, and every year improvement can be made in any table, however apparently perfect. But that is not what we have to



deal with. Why is a city like Toronto, that has not the natural advantages of Montreal, to have a percentage less? There is something radically wrong with us here in Montreal. Something more than appears on the surface, and if it cost the city a million it is the duty of our city fathers to find it out. Public health is of far more importance, as we have frequently said before, than lighting, paving, or police, and why we are compelled to live in the midst of death for the benefit of enriching a few contractors in beautifying our already handsome city, is an anomaly to us. If, as the editor says, our cattle and stock were decimated as our children are, there would soon be conventions held, causes investigated, and preventive measures employed at any cost, and without delay. How much more, then, should our children be protected than cattle? Each life lost through sanitary shortcomings is equally as great a crime in the eyes of Providence as manslaughter can be.

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OATMEAL AND TEETH.—It has long been noted in this country that in those districts where the use of oatmeal (in place of wheaten flour) prevails, we find children and adults with the best developed teeth and jaws; and so well recognized is the influence of oatmeal diet upon the teeth, that many practitioners order its use as an article of daily diet for children, in cases where the dentition seems likely to be either retarded or imperfect.

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KEEPING THE HANDS SMOOTH.—Glycerine is not used in the right way. To preserve the smoothness and softness of the hands, keep a small bottle of glycerine near the place where you habitually wash them, and whenever you have finished washing, and before wiping them, put one or two drops of the glycerine on the wet palm and rub the hands thoroughly with it as if it were soap, then dry lightly with a towel. Household work and bad weather will not prevent your skin from being smooth and soft if this plan of using glycerine is followed.

## Miscellaneous Selections.

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### WINTER.

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Poets, availing themselves to the fullest extent of the license universally accorded to them, have described other seasons in terms wholly inapplicable when put to the test of common sense; but, in the case of winter, none have been found to praise it. Even Thompson, whose epithet, in his "Seasons," of "gentle spring, ethereal mildness," is often as untrue to Nature as possible, has not a good word to say for winter. On the contrary, he writes:—

" Thus winter falls,  
A heavy gloom oppressive o'er the world,  
Through Nature shedding influence malign,  
And rouses up the seeds of dark disease.  
The soul of man dies in him, loathing life,  
And black with more than melancholy views."

To how many millions of people can winter present itself in any other light than that in which Thompson has displayed it? To the toiling dwellers in town, to the hard handed laborers in the country, to the fishermen at the coast, wresting a precarious subsistence from the depths of the ocean, winter must often come "black with more than melancholy views." For these classes life is a constant struggle at best, and, when added to the difficulties with which they have ordinarily to contend are cold weather and its concomitant conditions of enhanced cost of provisions and fuel, what wonder can there be if they take a "more than melancholy view" of their circumstances.

Although these matters lie, to some extent, outside of the province of hygiene, they are indirectly connected with it. There is no doubt that the condition of the classes we have referred to—the classes by which and through which the upper sections of

society may be said to live—might be considerably ameliorated, if they were better looked after as regards their sanitary surroundings.

The "seeds of dark disease," as Thompson poetically puts it, are sown in these classes when wet, cold weather sets in. Insufficient food, bad clothing, and defective house accommodation, each in their turn, and all collectively, help to swell the number of the sufferers from the many diseases prevalent at this season. When Death steps forth, with the barbs of his spear tipped with icicles, he deals out destruction as fatal and as certain as do the poisoned arrows of the savage warrior.

Winter, the season which many welcome on account of its being a period for friendly gatherings and hospitable enjoyment, is injurious to the old, the young, and the weakly, only the middle aged and the strong are proof against its attacks, and if they escape with impunity, without illness of any kind, the result is due rather to their ability to withstand the onslaughts of winter than to the innocuity of the season. Last winter, when similar weather occurred to that which we are now passing through, the death-rate rose rapidly, until in some localities it reached as high a point as 40, 50, and even 60 per 1,000 per annum. We may expect corresponding results at the present period. But we ought not, as many seem to do, to accept such matters with a kind of fatalist complacency. On the other hand, we should redouble our efforts to provide for the more pressing sanitary requirements of the poor and underpaid, and see that they are better housed, better clothed, and better fed than is their lot now.

Each of the lives lost through sanitary shortcomings is equally as valuable in the eyes of Providence as if it were that of a person in a higher social position; and it behoves us all, in our respective spheres, and to the extent of our respective powers, to diminish the sickness and mortality arising from the severity of winter, coupled with the absence of proper hygienic conditions, in the houses of a very large proportion of our poor. Employment upon public works should be given to all deserving applicants; and a systematic plan of relief should be established for the very large class placed, by force of circumstance, just above the level of pauperism, whose poverty should be regarded a misfortune, and not, as is now too often the case, treated as a crime.

—*Public Health.*

## A PLEA FOR CAB HORSES.

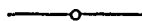
A good suggestion has been presented to us in the last number of the "Sanitary Review." It is the establishment of a shelter for cab horses:—

The establishment of "shelters" for cab-drivers is a step in the right direction, and one which (as in the case of most simple improvements) excites wonder that so sensible a course has been so long delayed. But the appearance of one novelty often suggests another, and the sight of these protections for the men naturally leads to the enquiry, "Why should there not also be shelters for the horses?"

Cab horses have a hard life at all times, but particularly in winter, when their sufferings must be severe. Any true lover of the horse must have often felt his heart ache when he passed along a cab stand at night, and heard the hollow coughs of the poor beasts echo through the deserted street, and saw how (when called to exertion) they moved slowly and stiffly until the drivers' lash urged them to a quicker pace. It is astonishing that these useful public servants should be so little cared for. Many of them are well bred and have seen better days, but the blood horse, with his fine skin and nervous susceptibility, fares no better than the coarse and sluggish animal whose hide is impervious to whipcord and whose mouth has been jerked into the toughness of rhinoceros horn. There being no places where cabmen can find shelter for their horses without the expenditure of money, a good animal has often, after completing a long and quick journey, either to "dry" in the sun or cool under the biting influence of a north-east wind. The existing evil is one which the drivers have not power to remedy, and can only slightly alleviate, for in order to ply for hire they must either weary their horses, and expose themselves to penalties, by loitering in the streets, or must wait, possibly for hours, on the rank.

Practically it would be impossible to place shelters for cab horses in every street where there is now a cab stand, and their erection, in the form of sheds, would, in most cases, seriously im-

pede the traffic. The most efficacious plan, but, at the same time, the most expensive one, would be to have, in all the leading thoroughfares, at least one covered and well lighted yard, where cabs could stand for hire day and night, and where water and provender could always be obtained for the horses, and refreshments for the men, at a reasonable cost. Such an arrangement would at once provide a shelter both for man and horse, which would greatly conduce to the health, and consequently the value, of the latter, and if properly placed under the supervision of the police would do much to diminish the abuses of the night cab system. The rent of the premises and the expenses connected therewith, should, if not defrayed by public subscription, be paid by the cab proprietors whose drivers make use of the shelter, by a nominal sum being charged on each vehicle which entered it. The matter is well worthy the consideration of cab owners, who would do well to unite in promoting the reform we advocate, for, by saving the wear and tear of their stock, they would in the end be gainers, and probably find themselves able to produce a better class of vehicle, for which a slightly increased charge might be reasonably asked. It would also be of extreme convenience to the public to know where they might be nearly certain to find a conveyance ready for hire at any hour of the night. We trust that some humane and benevolent persons will take the initiative and make an appeal for subscriptions, so that a fair trial may be made of the improvement in question, which, if carefully organized and managed, would, we believe, meet with signal success.



### THE FATHER OF SANITARY REFORM.

About 1,800 years ago Plutarch discharged the duties of Commissioner of Sewers and Public Buildings in his native city of Chæronea. The very fashionable people sneered at the commissioner, and wondered that a gentleman should stoop to anything so low, the ordinary, common-sense sort of people thought it odd that a philosopher should degrade himself to a

public policeman, while Plutarch's most intimate friends, who seem to have had a good deal of sarcastic humor, delighted to remind him of the remarkably exalted office to which his genius had raised him. On one of these occasions, the honest biographer made a reply worthy to be adopted as the motto of all sanitary reformers. "It is not for myself," said he, "that I do these things, but for my country. The usefulness takes off the disgrace, and the meaner the office I sustain, the greater the compliment I pay to the public."—*San. Review.*

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### COOKING FOR THE POOR.

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The poor, the really poor, have in our time very limited means, and, what is worse, no instruction or knowledge how to use them. The smaller our means are, the better arithmetic and method are required how to employ them, and many a workman's wife outdoes a Cambridge wrangler in the constant arithmetic calculations she has to make with pence, half-pence and even farthings. The greatest shortcoming among the poor in providing food is the fact that the continual purchasing process is most wasteful, and that the smallness of the means almost nullifies calculation. That the poor might get twice as much out of their means, if they could be better managed, is a plain fact; it is, however, scarcely in their power so to manage them, as far as purchase goes. Human courage fails to overlook immediate requirements; eschew the cup of tea and bread and butter, and buy a more wholesome meal. It is so quickly got that few enquire whether it is worth buying at all, and the immediate supply to the body is considered the most important matter, whether it is efficient or not.

The waste in the constant immediate supply of innutritious food must be an enormous item in the national expenditure. We reckon that about ten millions sterling are annually wasted merely by the foolish and wasteful purchases of the poor. Poor they are, and poorer they make themselves by bad management. There are some standard foods among the poor that require our immediate attention. First and foremost come tea among women, bread and bad butter among children, and alcohol among men.

It would astound all possible calculation to know the consumption of these articles in the class that earns less than £1 per week. Here the waste is even greater than among the working classes of higher standing. So bad has our cooking and food supply become, that at first sight one scarcely knows how to find anything else in the place of these things. To every hamlet in the kingdom the use of tea has penetrated, its mild stimulating power is an immediate relief, and our poor brains are losing the strength to look further ahead than from hour to hour. A regular tea-drinker is insatiable, the tea-pot is in constant requisition, and this slow waster of vitality does its work so effectually that nothing is left of a tea-drinking woman but parchment-like skin, covering dried-up bones, that have lost all their rounded muscular covering. The nourishment a tea-drinking mother can give to her suckling babe is not worth mentioning, for her milk is partially dried up, and what there is is watery, and of little value.

As we have said, tea, bread and butter, bad as it is, now and then potatoes, with dry bloaters, a savcloy or such things, form the staple food of the very poor. Is it, then, possible to do better, is it not, rather, a solemn duty of those in a higher position to find means that their fellow creatures shall have a different nourishment. Unless the poor have great courage and self-denial they can positively not live on their means at present prices, but when their intelligence is in some way educated to the proper use of the means, it is possible to get some comfort out of them. To direct the very poor in their culinary operations, we must at once make them understand that they gain more from all produce growing in their own country than from that which comes from foreign countries, particularly from the tropics.

Teach them at once to set aside tea and bread and butter as staple meals, for nothing can be more expensive and innutritious; and once for all let them understand that all poor eat too much bread. Bread by itself, as we get it, is hungry food, as they say; its nutritious qualities are unsatisfactory, and not half so great as those of mixed dishes of vegetables, with a little animal food, of flour, with animal fat and some aromatic mixture, or of various mixtures of vegetables. It is on such combinations that the food

for the poor must be modelled. Our teaching may seem prosy at first, but if our readers will have but patience, they will themselves be able to form their own conclusions and make up their own dishes, which is much better than always cooking by receipts.

To give some direction for meals and receipts, let us see how we can best combine with economy and profit the cheapest materials, and take the present winter season.

The poor, as we have said, should never take tea with bread and butter for breakfast; soups or stews, with a piece of brown bread for the husband, oatmeal porridge, with treacle and bread, for the children, are better breakfasts. The soup ought to be prepared over-night, and in the following manner:—

Take a piece of bacon or some dripping, cut up a few onions and brown them with it, thickening with flour; then pour in hot water, and stir well: if you can, put in a carrot and turnip, and add pepper, salt, and sweet herbs. Now simmer gently for half an hour, and either cut up raw potatoes into it boiling them till they are done, or first boil your potatoes, and then mix with the soup to a fine mash. Cost of soup: dripping or bacon, 2d.; onions, 1d.; seasoning, 1d.; potatoes 4lb. 4d.; total, 8d. This ought to make eight pints of soup, and give an excellent plateful for breakfast.

Take pork rinds, 3d.. cover them with cold water, and simmer for several hours. Then add (1d.) pot herbs, celery, turnip, carrot, and onion. Now put in soaked split peas, or Symington's pea meal to thicken; simmer again an hour and a-half, and season with pepper and salt. This also will make eight pints.—*House-keeper.*

(To be continued in next number.)



## Editorial Notices and Answers to Correspondents.

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We do not hold ourselves responsible for the views expressed by our contributors.

No notice can be taken of anonymous communications. Whatever is intended for insertion must be authenticated by the name and address of the writer, not necessarily for publication, but as a guarantee of good faith. Rejected communications cannot be returned, unless stamps for the return postage are enclosed. Books for review, and correspondence should be forwarded before the 10th of the month to be inserted in the current number, and addressed to DR. GEO. A. BAYNES, Editor PUBLIC HEALTH MAGAZINE, P. O. Box 25, Montreal.

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## EDITORIAL NOTICE TO OUR SUBSCRIBERS.

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It is now the eighth month since we issued the first number of the "PUBLIC HEALTH MAGAZINE," and we have every reason to be satisfied with the success of our efforts. We have supplied an acknowledged want—and the best proof of the truth of our assertion is the fact, that wherever our periodical has made its way, it has been cordially welcomed and kindly criticized alike by the Press and the People.

We shall pursue the same path that we at first traced out for ourselves. We shall endeavor to convey valuable information on vital points of interest in a simple, popular, but, we trust, not unscientific manner, we shall continue to point out to our readers how, by strict obedience to unerring laws of hygienic science, health may be preserved, disease be baffled, and life be prolonged to its utmost limit.

For our outlay, literary and pecuniary, upon the "HEALTH MAGAZINE" we have hitherto received no remuneration whatever. But, as the laborer is worthy of his hire, we respectfully ask our subscribers to pay us promptly when they receive our accounts. We are only in the first year of our literary existence, and need, like an infant, all the nourishment that we can obtain.