

## **A manual of diet and regimen for physician and patient / by Horace Dobell.**

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Dobell, Horace Benge, 1828-1917.  
Royal College of Surgeons of England

### **Publication/Creation**

[London] : J. Churchill and Sons, 1864.

### **Persistent URL**

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*Rescued*  
A MANUAL

OF

# DIET AND REGIMEN

FOR

## PHYSICIAN AND PATIENT.

BY

HORACE DOBELL, M.D.,

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS; FELLOW OF THE  
ROYAL MED. CHIR. SOC.; ETC.

PHYSICIAN TO THE ROYAL INFIRMARY FOR DISEASES OF THE CHEST.

—  
1864  
—



(SECOND EDITION.)

J. CHURCHILL AND SONS,

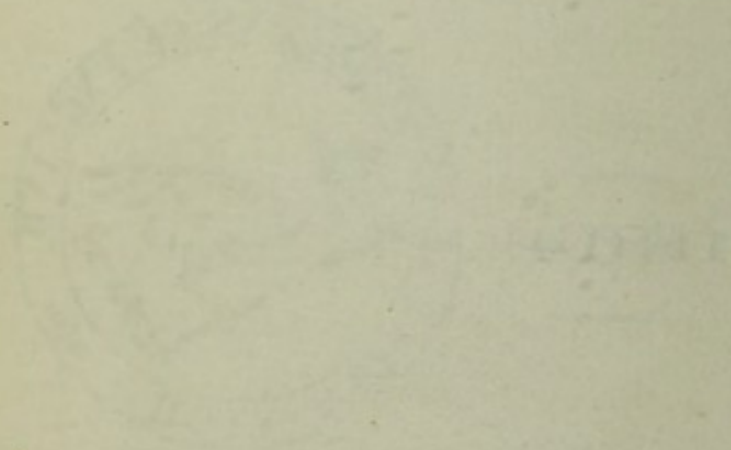
NEW BURLINGTON STREET.

WILLIAM A.

AMERICAN BOOK CONCERN

PUBLISHED BY THE

LONDON :  
PRINTED BY WERTHEIMER AND CO.,  
CIRCUS PLACE, FINSBURY CIRCUS.



## ADVERTISEMENT TO THE SECOND EDITION.

AN edition of 1,000 copies, sold in about three months, is, I hope, an evidence that my Manual is, to some extent, answering the purpose with which it was written, by supplying a long-felt want of my professional brethren. I regret that its reviewers have not at present offered any criticisms upon the scientific details of my work from which I can gather hints for its improvement; but, in answer to my request in the preface, many medical men have kindly sent me suggestions, of which I have not failed to take advantage in preparing this new edition for the press, and I beg to return my best thanks for their co-operation in my attempt to facilitate a systematic attention to diet and regimen.

The principal alterations in this edition will be found to consist in changes of place in the arrangement of the matter and in the addition of some explanatory passages in connection with the Tables.

I cannot lose this opportunity of repeating my request, that any one who has tried the Manual in its present form will favour me with his suggestions for its improvement.

H. D.

*June, 1864.*



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H. D.

1864

## P R E F A C E.

THIS Manual has been constructed to supply a want felt by most medical men engaged in the practice of their profession. I do not feel it necessary, therefore, to offer any apology for its appearance. But, although I have done my best to make it as well suited as possible to the purposes for which it is designed, I cannot help feeling, that, as it is the first of its kind, nearly every medical man may find in it some point in which he thinks it might be improved. This is, to a certain extent, unavoidable in anything prepared by one man for the use of many; and, fully aware of the difficulty, I have endeavoured to provide against it, by arranging the matter in such a form that any part can be easily erased, and by leaving spaces in which additions can be written under each subject. I hope, however, that any one who has fairly tried the Manual in its present form, will send me his suggestions for the improvement of any future editions that may be called for. The present state of opinion on the question of food, particularly increases the difficulty of presenting rules for diet, which, in their scientific explanations, shall satisfy the supporters of different theories. But I have not allowed this to deter me from publishing; because I feel, that, as every physician and surgeon, in private or public practice, is obliged, every day of his life, to give his patients instructions in diet and regimen; and as the results of scientific investigations may every year make some changes in our opinions on these as on other subjects,



it is useless to wait for some imaginary day when they shall be free from debateable questions, and far better to issue, from time to time, the best representative we can of the soundest views of the day, and to make such revisions from year to year as the advance of knowledge may require.

I am anxious, however, to state, that it has been my particular aim to avoid theories, as far as possible, and to take the results of the wide experience of a number of careful observers, as the basis of all important directions, whether of diet or of regimen, so that any defects which may afterwards be discovered in the scientific explanations may have as little effect as possible in vitiating the practical results.

My friend, Mr. Farrants, the accomplished President of the Microscopical Society, has given me such important assistance in the extensive series of examinations and calculations, which have been requisite as a basis for the dietetic portion of this Manual, that his name ought to have appeared on the title-page; and, although he has declined to appear in that place, I cannot afford to lose the advantage of his name as a guarantee for the rigid accuracy of all statements depending upon statistics and arithmetical precision. I wish, therefore, plainly to state, that Mr. Farrants has done for me a vast amount of work, which I had neither the time nor the talent to do half so well.

Although these labours have most of them been undertaken at my suggestion, and have been participated in by me, so that I am prepared to take the responsibility incurred by any statements I have made, Mr. Farrants came to the work with an accumulation of knowledge and



experience on the subjects, acquired by many years of application, and he must be considered as the chief workman in all that relates to the composition of food.

41, HARLEY STREET, W.

The composition of the articles of food given at p. 32 will not be found to agree exactly with any published analyses.

The object has been to obtain not only the best analysis of a single specimen of each article but the mean of the best analyses of several specimens. Therefore, before arriving at the conclusion stated, several of the best analyses of the substance by different eminent chemists have been compared: the relative amount of each proximate principle has been separately ascertained, taking the mean of the different determinations of it: and the combination of the means so ascertained has been adopted, as giving the fairest attainable approximation to the true composition of the article in question.

Analyses by the eminent chemists whose names are subjoined, have been used; 38 analyses of the cereal grains have been examined, 14 of the leguminous seeds, 36 of the esculent roots, 60 of food obtained from animals; on the whole, 186 separate analyses have been examined for the purpose of fixing, as nearly as practicable, the approximate mean composition of the articles given in the list.

The Alcohol Table (p. 24) is the result of an examination of several specimens of each alcoholic liquor, instituted to determine, as accurately as possible, the *weight* of absolute alcohol and of solid constituents in a *measured* quantity of liquid.

The quantities and proportions of the several alimentary elements adopted in the construction of the Diet Tables are the result of a most careful examination of the composition of all available diets known to have maintained health and strength in large numbers of adults. They have also been tested by personal and other experiments.

#### LIST OF ANALYSTS.

Berard.	Bromeis.	Girardin.	John.	Pasquier.	Schlossberger.
Berzelius.	Chevallier.	Gobley.	Johnston.	Payen.	Schrader.
Bibra.	Chevreuil.	Gorham.	Lampadius.	Peligot.	Schutz.
Bizio.	Christison.	Haidlen.	Lehman.	Playfair.	Sinclair.
Bostock.	Crome.	Henri.	Liebig.	Pogiole.	Sprengel.
Bouillay.	Davy.	Herapath.	Michaelis.	Polek.	Trommsdorf.
Boussingault.	Dumas.	Herberger.	Mulder.	Prout.	Vauquelin.
Braconnot.	Einhoff.	Hermstadt.	Norton.	Reinsch.	Way.
Brande.	Frank.	Horsford.	Ogston.		



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## DIRECTIONS FOR USING THE MANUAL.

1. The large type is for the Patient, who must follow every rule not marked "No," and is at liberty to take any article of food, or to adopt any mode of dressing food or any condition of food not marked "No."
2. The small type is for a remembrancer to the Medical man.
3. The Hygienic rules are adapted to the promotion and maintenance of vigorous health in adults living in the climate of the United Kingdom, and not suffering from any special diseases. (See pages 11-20).
4. Each diet table contains all the essential elements of nutrition, in forms, quantities, and proportions necessary to the maintenance of health in an adult living in the climate of the United Kingdom. (See Diet Tables, pages 27-31). The tables have been made complete without alcohol, leaving this to be ordered or not by the medical man, according to his views upon the subject. But, if spirituous liquors are added to any diet table, the quantity of carbon which they contain must be borne in mind. (See Alcohol Table, p. 24).
5. The Manual is to be marked according to the following rules, and then given to the patient as his daily guide,



and he should always produce it for revision when he sees his medical man.

- a. Make the marks in pencil, so that they can be rubbed out and altered from time to time.
- b. In the space left under each heading, write any special directions not contained in the text.
- c. Write "No" against any rule not to be followed, or any diet-table, article of food, or mode of dressing food, which is forbidden.
- d. Write "YES ESPECIALLY" against any rule, article of food, diet table, or mode of dressing food especially recommended.
- e. In ordering spirituous liquors, turn to the Alcohol Table, p. 24, and state on the line at the top of the page, the quantity of absolute alcohol to be taken in each 24 hours, and write "YES ESPECIALLY" against the liquor especially selected as its source, and "No" against any which is forbidden. (See *ante* DIRECTIONS, 3).

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NOTE.—For Hospital Practice, a number of Manuals should be kept ready-marked, in such a manner as to suit different classes of cases; as, for example, Fatty Degeneration, Diabetes, Tuberculosis, Gout, Obesity, the various forms of Dyspepsia, and the like. A single copy for each class might be marked by the Physician or Surgeon, and the rest done by a pupil or clerk.

# RULES FOR PROMOTING AND MAINTAINING VIGOROUS HEALTH\*

IN ADULTS LIVING IN THE CLIMATE OF THE UNITED  
KINGDOM.

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## VENTILATION AND HEATING.

1. No sitting or sleeping room should be left long without a fire, and every room in which persons live, either by day or by night, should have some opening by which it communicates freely with the outer air; but this should be so arranged that no draught can fall upon the persons in the room.†

2. If several rooms are occupied by turns during the twenty-four hours, the temperature of any one should not differ greatly from that of the rest.

3. No draught should blow upon a bed, and during sleep the whole body should have one covering at least of woollen material; for, while it is very important to keep the air of sleeping rooms fresh, it must be remembered that the body is more susceptible to chills during sleep than waking, and that changes in the temperature of the outer air are especially apt to occur during the night, and are, therefore, in danger of producing chills before they are observed. (See Sleep, p. 13, Rule 11).

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\* These Rules will require to be modified by the medical man to suit special cases.

† These conditions may be secured by "The Open Window Draughtless Ventilator," which is applied at a small cost by Mr. White, Builder, 58, St. Paul's Street North, New North Road, N.



## CLOTHING.

4. In winter, the body and limbs, from the root of the neck to the toes and elbows, should be covered, next the skin, with some woollen material, such as lamb's wool or flannel.\*

5. In summer, the material may be lighter, as merino, and need not cover the limbs.

6. The same woollen dress should not be worn both night and day, but should be changed for a woollen sleeping *vest* of the same material as that worn during the day. (See Sleep, p. 13, Rule 11).

7. Having provided that the skin is so covered that it is protected against sudden changes of temperature, all other clothing should be limited to that which is sufficient to preserve a comfortable feeling of warmth under the different changes of the season and of the weather.

8. Over-clothing, *i.e.*, such as keeps the body perspiring while at rest, or produces perspiration under very slight exertion, should be avoided, especially over-clothing of any one part of the body by which it is kept hotter than the rest.

9. It is of the greatest importance to keep the feet dry and as warm as the rest of the body. If the weather is damp, this can only be done by wearing goloshes when out of doors. (See Bathing, p. 16, rule 23).

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\* A very convenient combination of Vest and Drawers in one, for ladies and children, is sold by Hudson, Ludgate Hill, under the name of "The Union Dress."

## SLEEP.

10. During ordinary health, the hours spent in actual sleep should not exceed eight ; and if the sleep is sound, continuous, and refreshing, six will be sufficient for many persons. (See Rest and Change, p. 18, Rule 28).

11. During sleep, it is equally important to keep the body pleasantly warm, and to avoid keeping it overheated ; and, as serious changes in the weather may happen in the night, and the lowest temperature in the twenty-four hours naturally occurs between 2 o'clock and 6 o'clock a.m., the ventilation and clothing must be prepared for these contingencies. (See Ventilation, p. 11, Rule 3 ; and Clothing, p. 12, Rule 6).

12. If sleep is taken after meals, it should not exceed half an hour in duration ; it should be taken sitting back in an easy chair, with the head supported behind, not lying down and not sitting with the chin resting on the breast ; the feet should be kept warm, and the dress loose round the neck and waist.



## EXERCISE.

13. During ordinary health, some part of every day ought to be spent out of doors; and in ill-health it is of great importance not to discontinue the observance of this rule without good reason; for, although *in certain states of disease it may be very important to remain in doors*, it must not be forgotten that proper clothing, goloshes, respirators, and umbrellas, may make it not only safe but advantageous to go out of doors for exercise, when, without them, it would be very injurious. (See Posture, p. 15, Rules 17, 18).

14. Out-of-door exercise should be as active as the strength will allow, and should always be continued up to the point of slight—but not over—fatigue. This will be the best measure of the proper amount for both the weak and the strong.

15. Unless the air is pure, and the person strong, exercise before breakfast is more likely to do harm than good; a tumbler of milk and a biscuit, however, will be a sufficient meal to take before the walk or ride—a more substantial breakfast being taken afterwards. (See Meals, page 19, Rule 34).

16. Especial care is needed not to expose the body to chills when heated by exercise; and cold drinks should not be taken at that time, unless the exercise is about to be continued immediately, and even then the quantity of cold drink taken at once should be very small. (See Meals, pages 19-26, Rule 37).



## POSTURE.

17. It is of great importance to acquire a habit of drawing the breath deeply and slowly, so as freely to expand the lungs during ordinary breathing. This requires that the head and shoulders be thrown well back in walking, sitting, and standing, and that no clothing be worn tight round the ribs. Those engaged in sedentary or stooping occupations should especially attend to this advice.

18. Those whose occupation obliges them to maintain the erect posture for a number of hours each day, should take every opportunity of lying flat down, even if only for a few minutes at a time. They should also bear in mind that standing will not take the place of walking exercise. (See Exercise, p. 14, Rule 13).

19. All persons whose pursuits require the long continuance or frequent assumption of any particular position or movement of the body or limbs, should take every opportunity of changing it for an opposite position or movement. (See Rest and Change p. 18, Rule 29 ; and Sleep, p. 13, Rule 12).



## BATHING.

20. Warm baths, Turkish baths, vapour baths, shower baths, and cold plunges, should only be used under special medical orders.

21. During ordinary health, the skin of the body and limbs should be smartly rubbed once in twenty-four hours, first with a rough towel, wet with cold water, and then with a dry one till in a glow. The bather should stand on a dry rug while using this "*cold friction bath*," and it should not last more than one or two minutes, including both the wet and the dry rub.\* Salt may be advantageously added to the water;† and the bath may be used either on rising or going to bed, according to the feelings and convenience of each individual.

22. If the weather is very cold or the person delicate and chilly, the upper half of the body should be uncovered and rubbed first, and then a woollen vest should be put on, and the lower half uncovered and rubbed.

23. It is well to accustom the feet to being washed in cold water, but it must be done cautiously at first, and they should never be kept in the water more than a few seconds.

24. It is obvious, that there are times when cold bathing of all kinds must be temporarily discontinued.

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\* A piece of rough huckaback, 18 inches square, answers best for the wet rub, and the bath-sheet, cut in half, sold by Davies, 121, High Holborn, is best for the dry rub.

† Sea-salt, for this purpose, is prepared by Messrs. Tidman, and sold by all chemists.

## REGULATION OF THE BOWELS.

25. As a general rule, the bowels ought to act, at some stated time, once in the twenty-four hours; and it is best to accustom them to act in the morning, after breakfast.

26. If they do not act spontaneously, they should be assisted by some article of diet which is found to affect them, or by some harmless aperient medicine, which must be prescribed by a medical man to suit the particular case, as the best aperient for one person may be the worst for another.

27. Provided that an aperient medicine is suited to the case, contains no drug injurious to the general health, and is not taken oftener than every second night, there is no harm in taking it at bed-time, whenever the bowels have not acted satisfactorily during the day.



## REST AND CHANGE.

28. Active life is essential to the health of body and mind; but both require periods of rest, in addition to the regular hours of sleep. It is much better, therefore, to work vigorously for a time and then to rest, than to keep up a monotonous round of lifeless drudgery. (See Sleep, p. 13, Rule 10; and Exercise, p. 14).

29. The "current of the thoughts" is to the mind what posture is to the body; and both require change to prevent weariness and deformity. (See Posture, p. 15, Rule 19).

30. Rest of body or mind may be obtained either by abstaining from all bodily or mental exercise, or by change of occupation, and as the one gives entire rest and the other only partial rest, it is best to adopt each of these measures at different times.

31. It must be remembered, that, as the mind acts by means of the brain, which is a part of the body, it cannot act healthfully while the body is exhausted.

## MEALS.

32. Counting from the time of beginning one meal to that of beginning the next, food should be taken at regular intervals of from four to five hours, except the interval between dinner and a very slight tea, which may be reduced to two or three hours. In weakly persons, and when the appetite will allow only a very small meal to be taken at one time, the intervals between all the meals may be reduced to from three to four hours. In illness, the interval must be ordered day by day by the medical man.

33. The chief meal of the day—the full-meal—by whatever name it is called, should be taken at whatever hour active occupation, both bodily and mental, can be suspended for about two hours; provided always that not less than three hours elapse between the full meal and bedtime.

34. Breakfast should be the second best meal of the day, and should be taken leisurely immediately after rising in the morning. (See Exercise, p. 14, Rule 15).

35. The other meals should be taken punctually at the fixed hours, but should be only light refreshments, and small in bulk.

36. No food should be taken in the intervals between the regular meals.

37. As a general rule, pure water may be taken at any time, if indicated by thirst, so that the body is not heated



by exercise, and the quantity drunk at once does not exceed a quarter of a pint. (See Exercise, p. 14, Rule 16).

38. Spirituous liquors should not be taken the first thing in the morning or the last thing at night, without medical orders, and they should not be drunk stronger than in the proportion of one ounce avoirdupois of absolute alcohol in about ten fluid ounces of liquid. (See Alcohol Table, p. 24).

39. ALCOHOL FASTS.—Those who habitually take alcohol daily, should abstain from it entirely for a few days twice or thrice a year.

## LIST OF VARIOUS ARTICLES OF ANIMAL FOOD.

The Patient is at liberty to take whatever is not marked "No."

FISH AND SHELL-FISH.	MEATS.	POULTRY AND GAME.
Brill . . .	Beef . . .	Chicken . . .
Cod . . .	Bacon . . .	Duck . . .
Herring . . .	Ham . . .	Fowl . . .
Haddock . . .	Lamb . . .	Goose . . .
Mackerel . . .	Liver . . .	Guinea Fowl . . .
Pike . . .	Mutton . . .	Pigeon . . .
Plaice . . .	Pork . . .	Grouse . . .
Prawn . . .	Sweet-bread . . .	Hare . . .
Salmon . . .	Tongue . . .	Partridge . . .
Shrimp . . .	Veal . . .	Pheasant . . .
Skate . . .		Rabbit . . .
Sole . . .		Venison . . .
Trout and other } small fresh- water Fish . }		Woodcock . . .
Turbot . . .		
Crab . . .		
Cray Fish . . .		
Lobster . . .		
Oyster . . .		

## CONDITIONS IN WHICH ANIMAL FOOD MAY BE TAKEN.

The Patient is at liberty to adopt whatever is not marked "No."

Dried . . . Fresh . . . Pickled . . . Salted . . .

## MODES OF DRESSING ANIMAL FOOD.

The Patient is at liberty to adopt whatever is not marked "No."

Baked. Boiled . Broiled . Curried  
Fried . Hashed . Minced . Roast . Stewed .



## POTASH-VEGETABLES AND FRUITS.

The Patient is at liberty to take whatever is not marked "No."

VEGETABLES.	FRUITS.
Asparagus . . .	*Apples. . . .
*Broad Beans . . .	Almonds . . . .
Brocoli . . . .	*Chestnuts . . . .
*Carrot . . . .	*Cherries . . . .
Cabbage . . . .	Currants . . . .
Celery . . . .	*Dates . . . .
Cauliflower . . . .	*Figs . . . .
Cress . . . .	Grapes . . . .
Cucumber . . . .	Gooseberries . . . .
Endive . . . .	Lemons . . . .
French Beans . . . .	*Nuts & Filberts
Lettuce . . . .	*Oranges . . . .
Mustard (green)	Pears . . . .
Mushrooms . . . .	*Pine Apples . . . .
Onions . . . .	*Plums . . . .
*Parsnip . . . .	*Prunes . . . .
Peas (green). . . .	*Raisins . . . .
*Potato . . . .	Raspberries . . . .
Radish . . . .	Strawberries . . . .
Rhubarb . . . .	*Walnuts . . . .
Spinach . . . .	
Turnip . . . .	
Tops . . . .	
Watercress . . . .	

Those marked \* contain a large quantity of Saccharine matter or of Starch.

## CONDITIONS IN WHICH VEGETABLES MAY BE TAKEN.

The Patient is at liberty to adopt whatever is not marked "No."

Cooked . . . . . Pickled . . . . . Raw . . . . .

## CONDITIONS IN WHICH FRUITS MAY BE TAKEN.

The Patient is at liberty to adopt whatever is not marked "No."

Cooked . . . . . Dried . . . . . Preserved . . . . . Raw . . . . .

SWEETS.

The Patient is at liberty to take whatever is not marked "No."

When a special recipe is not given, see Miss Acton's Cookery.

PASTRY.		Puddings without Crust.	Confectionery and other Sweets.
Pies or Tarts.	Puddings with Crust.		
Containing Fruits, dry. " fresh. Jam.	Containing Fruits, dry. " fresh. Jam.	Consisting of Arrowroot. Batter, boiled. " baked. Bread. Bread & Butter. Flour (see recipe) Macaroni. Rice (see recipe) Sago or other farinaceæ. Suet (see recipe) Tapioca. Vermicelli.	Custard, boiled. " baked. Ice (Water). " (Cream). Jelly, Calfsfoot. " Gelatine, or Isinglass. Sweet Cakes.

MISCELLANEOUS ARTICLES OF DIET.

When a special recipe is not given, see Miss Acton's Cookery.

The Patient is at liberty to take whatever is not marked "No."

*Barley Water.	Milk with Brandy	} see recipe.
*Bread, aërated.	" " Rum	
" bakers.	" " Whisky	
Blatchley's Diabetic Biscuits.	" " Suet	
Butter.	*Pea-flour.	
Broth, chicken.	*Pie-crust.	
" mutton (see recipe).	*Porridge (see recipe).	
" veal.	*Port Wine Jelly (see recipe).	
Cheese.	Soup, gravy.	
Cream.	" invalid (see recipe).	
Cream cheese.	" mock turtle.	
Coffee	" ox tail.	
Chocolate } see recipe.	" turtle.	
Cocoa	Suet.	
Curds.	*Sugar.	
Eggs.	Tea, beef (see recipe).	
*Gruel, oatmeal.	" black.	
" groat.	" green.	
Milk.	" linseed.	
	Water.	

Those marked \* contain a large quantity of Saccharine matter or of Starch.



## ALCOHOL TABLE.

Take in 24 hours \_\_\_\_\_ ozs. avoirdupois of Absolute Alcohol.\*.\*

On the above line is to be stated the quantity by weight of absolute Alcohol to be taken in 24 hours, and in the Table below "YES ESPECIALLY" is to be written against the Liquor especially selected as its source, and "No" against any that is forbidden.

The weight of Absolute Alcohol (spec. grav. .796 at 68° Fht.), and of Solid dissolved, in measured quantities of Spirituous Liquors.

SPIRITUOUS LIQUORS. (For ACID and SUGAR, see p. 25).		*.* This column shows the quantity by measure of each Spirituous Liquor which contains 1 oz. avoird. of absolute Alcohol.	1 oz. avoird. of Carbon is contained in fluid ozs.	One Imperial Pint contains			Quantity per cent.	
				Alcohol — ozs. avoird.	Extract. — ozs. avoird.	Carbon, — ozs. avoird.	Alcohol — Measure.	Extract. — Weight.
		Fld.oz.						
ARDENT SPIRITS	Proof Spirit . . . . .	2.26	4.3	8.8	—	4.6	56.0	—
	Whisky . . . . .	2.6	5.0	7.6	.1	4.0	48.3	.6
	Brandy . . . . .	2.7	5.0	7.4	.2	4.0	47.1	1.2
	Rum . . . . .	2.8	5.3	7.1	.2	3.8	45.0	1.1
	Arrack . . . . .	3.0	5.8	6.6	.1	3.4	41.4	.4
	Gin . . . . .	3.2	5.5	6.3	.9	3.6	39.8	4.5
WINES	Roussillon . . . . .	6.4	8.6	3.1	1.7	2.3	19.6	8.0
	Sherry . . . . .	6.6	10.2	3.0	1.0	2.0	19.2	4.6
	Cape Madeira . . . . .	6.8	11.0	2.9	.7	1.8	18.6	3.5
	South African Port . . . . .	6.8	10.0	2.9	1.1	2.0	18.6	5.6
	Port . . . . .	6.9	10.2	2.9	1.1	2.0	18.5	5.5
	Bucellas . . . . .	7.3	11.2	2.7	.9	1.8	17.2	4.4
	Marsala . . . . .	7.5	11.7	2.6	.9	1.7	16.9	4.4
	East India Madeira . . . . .	7.6	11.3	2.6	1.0	1.7	16.5	4.8
	Frontignac . . . . .	9.0	7.8	2.2	3.5	2.6	14.0	16.1
	Champagne . . . . .	12.6	11.3	1.6	2.3	1.8	10.4	11.0
	Hock . . . . .	13.4	20.4	1.5	.5	1.0	9.5	2.5
	Hungarian Red Vöslau . . . . .	14.1	21.2	1.4	.5	.9	8.9	2.5
	Burgundy . . . . .	15.2	23.8	1.3	.4	.8	8.3	1.8
	Moselle . . . . .	15.2	23.3	1.3	.4	.8	8.3	2.0
	Claret . . . . .	16.3	23.4	1.2	.5	.8	8.0	2.5
	Sauterne . . . . .	19.0	27.2	1.0	.5	.7	6.6	2.3
Hungarian White Neszmely . . . . .	19.0	28.8	1.0	.4	.7	6.6	1.8	
CIDER		64.0	40.0	.5	.8	.6	3.0	3.7
MALT LIQUORS	Ale, Burton, Bass, $\diamond$ 84/ . . . . .	12.5	9.0	1.6	3.4	2.2	10.1	15.7
	" " " $\diamond$ 60/ . . . . .	14.2	13.0	1.4	2.0	1.5	8.9	9.6
	" Pale " $\Delta$ 60/ . . . . .	19.0	17.5	1.0	1.5	1.1	6.6	7.0
	" India (Gardner, $\times$ 54/) . . . . .	23.0	28.0	.9	.6	.7	5.5	3.0
	" Bottled { Scotch (Edinburgh) . . . . .	19.0	13.1	1.0	2.4	1.5	6.6	11.4
	" " { Pale . . . . .	25.0	20.5	.8	1.4	1.0	5.0	6.6
	" "Eightpenny" . . . . .	22.7	22.2	.9	1.1	.9	5.7	5.4
	" Family, 1/ gallon . . . . .	24.9	22.0	.8	1.2	.9	5.4	5.7
	" "Fourpenny" . . . . .	25.4	23.0	.8	1.1	.8	5.2	5.3
	Stout, Dublin (bottled) . . . . .	20.8	16.7	.9	1.7	1.2	6.1	8.2
" London . . . . .	21.5	18.9	.9	1.5	1.1	5.9	6.9	
Porter, London . . . . .	35.6	26.6	.6	1.2	.8	3.7	5.6	

If a spirituous liquor contains more than one ounce of absolute Alcohol in about ten fluid ounces of Liquid, it should be reduced to this strength before it is drunk, by the addition of water or some other non-spirituous fluid.

N.B.—Fluid-ounce measures can be obtained at all chemists' shops.



## ACID AND SUGAR IN SPIRITUOUS LIQUORS.

From Editor's Appendix to "The Chemistry of Wine," by G. J. Mulder. Edited by H. Bence Jones, M.D., F.R.S., pp. 381-3.

## ACID.

"Proceeding from the least acid wine to the most acid we have Sherry, Port, Champagne, Claret, Madeira, Burgundy, Rhine wine, Moselle. The least acid fluids examined were Geneva and Whisky; then Rum, Brandy, Ale, Porter, Stout; the wines were all more acid than the malt-liquids."

"The nature of the acid was not absolutely determined, but a volatile acid distils over from wine, which is not acetic acid; and the action of polarised light shows that tartaric acid is seldom present, hence the fixed acid is most probably racemic, and perhaps malic acid."

## SUGAR.

"I found no Sherry, Port, Madeira, or Champagne that did not contain more or less uncrystallisable sugar; (two samples of Sherry excepted, which were free from sugar.) I met with no Claret, Burgundy, Rhine, or Moselle wine, (excepting only one sample of Sauterne,) which was not free from every kind of sugar. Usually spirits contain no sugar; but one specimen of genuine French brandy had some cane-sugar added to it. All kinds of Ale, Porter, and Stout contain much glucose [grape-sugar]. Hard cider, I found also to be perfectly free from sugar. Sweet cider contained uncrystallisable sugar."

\* \* \* \* \*

"The fluids examined may be arranged in the following order, commencing with those which contain no sugar, and ending with the most saccharine:

"Geneva, Rum, Whisky, Claret, Burgundy, Rhine, Moselle. These have no sugar. Brandy, Sherry, Madeira, Champagne, Port, Cider, Porter, Stout, Malmsey, Ale, Tokay, Samos, Paxarete, Cyprus."



## ESSENTIALS OF A NORMAL DIET.

(See note, p. 5).

A healthy adult man of average stature, taking moderate exercise, will require and can consume, daily, from 32 to 40 ounces avoirdupois of dry nutritious food, which should have the following characters:—

1. About  $\frac{1}{200}$  must be mineral matter.
2. From  $\frac{2}{3}$  to  $\frac{1}{2}$  may be water, leaving  $\frac{3}{3}$  or not less than  $\frac{1}{2}$  or from 15 to 20 ozs. of anhydrous solid alimentary material.
3. Three or four ounces of plastic matter must be combined with three or four times that quantity of respiratory material.
4. The Respiratory constituents must contain a mixture of fat with saccharine materials (hydro-carbons with carbo-hydrates) in the proportion of about 1 of the former to 3 of the latter.  
These respiratory constituents should supply from 6 to 10 ounces of carbon, the exact amount required varying with season, exercise, etc.\*
5. The Articles of Food must be sufficiently varied to meet the requirements of the taste and of the appetite, and their Mechanical and other Conditions must be suited to the digestive powers of the stomach.

In addition to these characters, every complete diet must contain some potash-vegetable or fruit; and the total amount of water taken in 24 hours, including that contained in the dry food, must not be less than 70 ozs. avoirdupois.

\* As all the carbon needed for the renovation of the tissues is contained in the albuminoids or proteinaceous compounds (plastic), whose transformation into tissues constitutes the nutrition of animals, after ascertaining that a sufficient quantity of plastic material is supplied by the nitrogenous constituents of the food, we have only further to provide the *additional* quantity of carbon which is required to support the function of respiration, and afford, by its oxidation, the heat necessary to maintain the proper temperature of the body. It is carbon for combustion only, then, to which reference is made, when estimating the quantity to be supplied by the non-nitrogenous, or heat-giving ingredients of food.



## DIET TABLES.

The following Diet Tables have been constructed to show how the essentials of a normal diet may be secured, whether the diet be complicated and expensive or simple and cheap. Each table has been made complete in itself, as an allowance of food for twenty-four hours, the totals of the corresponding columns of the analyses being about the same in all the Tables. Other combinations to afford any variety required may be arranged after these models from the materials given in the PER CENTAGE ANALYSIS TABLE, pages 32-34. With regard to alcohol, see Direction 4, p. 9.

In all cases, either some potash-vegetable or fruit, or lime-juice, must be taken occasionally, and salt as taste indicates.

## No. 1.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccha- rine. ozs.	Carbon ozs.
	6	Meat, Poultry, or Game (cooked) . . . .	3'97	1'35	'53	...	'42
	4	Fish . . . . .	3'19	'66	'03	...	'02
	10	Bread . . . . .	4'20	1'00	'07	4'53	1'93
	8	Potatoes . . . . .	5'81	'14	...	1'84	'76
	2	Rice . . . . .	'18	'10	'01	1'63	'73
	2½	Sugar . . . . .	...	...	...	2'50	1'05
	2½	Butter . . . . .	...	...	2'50	...	1'85
5		Milk . . . . .	4'34	'25	'17	'21	'22
16		Coffee . . . . .	15'77	...	...	'22	'10
16		Tea . . . . .	15'95	...	...	'05	'02
17		Water . . . . .	17'	—	—	—	—
54	35		70'41	3'50	3'31	10'98	7'10
				In Plastic matter . . . .			1'89
					Total . . . .		8'99



## No. 2.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccha- rine. ozs.	Carbon. ozs.
	8	Meat, Poultry, or Game (cooked) . . . .	5'29	1'80	'71	...	'56
	12	Bread . . . .	5'04	1'20	'08	5'44	2'32
	12	Potatoes . . . .	8'71	'20	...	2'76	1'14
	2	Butter . . . .	...	...	2'00	...	1'48
	2	Sugar . . . .	...	...	...	2.00	'84
5		Milk . . . .	4'34	'25	'18	'21	'23
16		Chocolate . . . .	15'20	'07	'32	'38	'42
16		Tea . . . .	15'95	...	...	'05	'02
16		Water . . . .	16'00	—	—	—	—
53	36		70'53	3'52	3'29	10'84	7'01
In Plastic matter . . .							1'90
Total . . .							8'91

## No. 3.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccha- rine. ozs.	Carbon. ozs.
	18	Bread . . . .	7'56	1'80	'12	8'15	3'47
	3½	Cheese . . . .	1'28	1'07	'89	'08	'70
	3	Bacon . . . .	'76	'25	1'88	...	1'48
	1½	Sugar . . . .	...	...	...	1'50	'63
5		Milk . . . .	4'33	'25	'17	'21	'22
20		Chocolate . . . .	19'00	'10	'40	'50	'50
20		Tea . . . .	19'93	...	...	'07	'04
20		Water, . . . .	20'00	—	—	—	—
65	26		72'86	3'47	3'46	10'51	7'04
In Plastic matter . . .							1'87
Total . . .							8'91

## No. 4.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccha- rine. ozs.	Carbon. ozs.
	8	Fish . . . . .	6.38	1.33	.06	...	.05
	16	Bread . . . . .	6.72	1.60	.11	7.25	3.09
	8	Potatoes . . . . .	5.81	.14	...	1.84	.76
	2½	Butter . . . . .	...	...	2.50	...	1.85
10		Milk . . . . .	6.93	.40	.28	.34	.36
20		Cocoa . . . . .	19.10	.10	.60	.20	.56
	1½	Sugar . . . . .	...	...	...	1.50	.63
25		Water . . . . .	25.00	—	—	—	—
55	36		69.94	3.57	3.55	11.13	7.30
In Plastic matter . . .							1.93
Total . . .							9.23

## No. 5.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat, ozs.	Saccha- rine. ozs.	Carbon. ozs.
	16	Bread . . . . .	6.72	1.60	.11	7.25	3.09
	3	Peas . . . . .	.41	.65	.04	1.40	.65
	4	Bacon . . . . .	1.14	.33	2.50	...	1.98
	2	Cheese . . . . .	.73	.61	.51	.05	.40
8		Milk . . . . .	6.94	.40	.28	.34	.36
20		Coffee . . . . .	19.71	...	...	.28	.13
	1	Sugar . . . . .	...	...	...	1.00	.42
35		Water . . . . .	35.00	—	—	—	—
63	26		70.65	3.59	3.44	10.32	7.03
In Plastic matter . . .							1.94
Total . . .							8.97



## No. 6.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccha- rine. ozs.	Carbon. ozs.
40		Milk . . . . .	34.68	2.00	1.40	1.68	1.80
	4	Rice . . . . .	.36	.20	.02	3.26	1.46
	3	Eggs (two). . . . .	2.15	.45	.32	...	.26
	2½	Sugar . . . . .	...	...	...	2.50	1.05
	1	Butter . . . . .	...	...	1.00	...	.74
	9	Bread . . . . .	3.78	.90	.06	4.08	1.74
30		Water . . . . .	30.00	—	—	—	—
70	19½		70.97	3.55	2.80	11.52	7.05
							In Plastic matter . . . . . 1.92
							Total . . . . . 8.97

## No. 7.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccha- rine. ozs.	Carbon. ozs.
	20	Bread . . . . .	8.40	2.00	.14	9.06	3.86
	3	Eggs (two). . . . .	.21	.44	.32	...	.26
	1½	Butter . . . . .	...	...	1.50	...	1.11
20		Milk . . . . .	17.34	1.00	.70	.84	.90
20		Cocoa. . . . .	19.10	.10	.60	.20	.56
	¾	Sugar . . . . .	...	...	...	.75	.31
25		Water . . . . .	25.00	—	—	—	—
65	25¼		70.05	3.54	3.26	10.85	7.00
							In Plastic matter . . . . . 1.91
							Total . . . . . 8.91

## No. 8.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccha- rine. ozs.	Carbon. ozs.
	8	Rice . . . . .	.72	.40	.03	6.54	2.93
	7½	Eggs (five). . . . .	5.40	1.11	.80	...	.65
	2½	Sugar . . . . .	...	...	...	2.50	1.05
	1¼	Butter . . . . .	...	...	1.25	...	.92
40		Milk . . . . .	34.68	2.00	1.40	1.68	1.80
30		Water . . . . .	30.00	—	—	—	—
70	19¼		70.80	3.51	3.48	10.72	7.35
							In Plastic matter . . . . . 1.89
							Total . . . . . 9.24



## No. 9.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccha- rine. ozs.	Carbon- ozs.
	9	Flour . . . . .	1'13	1'28	'09	6'28	2'82
	1 $\frac{3}{4}$	Suet . . . . .	...	...	1'75	...	1'38
	3	Sugar . . . . .	...	...	...	3'00	1'26
	6	Eggs (four) . . . . .	4'32	'88	'64	...	'52
27		Milk . . . . .	23'41	1'35	'94	1'13	1'21
42		Water . . . . .	42'00	—	—	—	—
69	19 $\frac{3}{4}$		70'86	3'51	3'42	10'41	7'19
In Plastic matter . . .							1'89
Total . . .							9'08

## No. 10.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccha- rine. ozs.	Carbon ozs.
	16	Oatmeal . . . . .	2'14	2'40	'93	8'51	4'46
22		Milk . . . . .	19'07	1'10	'77	'90	'99
	1 $\frac{3}{4}$	Butter . . . . .	...	...	1'75	...	1'30
	4 $\frac{1}{2}$	Sugar . . . . .	...	...	...	'75	'32
49		Water . . . . .	49'00	—	—	—	—
71	18 $\frac{1}{2}$		70'21	3'50	3'45	10'16	7'07
In Plastic matter . . .							1'89
Total . . .							8'96

## No. 11.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccha- rine. ozs.	Carbon- ozs.
	25	Bread . . . . .	10'50	2'50	'17	11'33	4'82
	3 $\frac{1}{4}$	Cheese . . . . .	1'18	1'00	'83	'08	'65
	2	Butter . . . . .	...	...	2'00	...	1'48
60		Water . . . . .	60'00	—	—	—	—
60	30 $\frac{1}{4}$		71'68	3'50	3'00	11'41	6'95
In Plastic matter . . .							1'89
Total . . .							8'84



**PER-CENTAGE TABLE**  
**SHOWING THE APPROXIMATE COMPOSITION OF VARIOUS ARTICLES OF FOOD.**

The three middle columns (Mineral, Complement, Water), with either the four preceding columns (Proximate principles), or with the four following columns (Organic elements), make together 100 parts.

See Note, p. 7.

FOOD.	Plastic.	Fat.	Saccharine	Gela- tine, Acid,&c.	Min- eral.	Com- plement	Water	N.	H.	O.	C	C. from Plastic.	C. from Respi- ratory.
Almonds	25.3	56.8	10.0	—	—	4.2	3.7	4.0	9.1	16.3	62.7	13.7	49.0
Apples	.2	—	13.6	.1	—	2.2	83.9	.03	.97	7.6	5.3	.1	5.2
Apricots	.6	—	19.0	1.4	—	1.6	77.4	.1	1.4	11.3	8.2	.3	7.9
Arrowroot	—	—	100.0	—	—	—	—	—	7.1	56.5	36.4	—	36.4
Artichoke	1.9	.1	18.8	—	1.8	.7	76.7	.3	1.4	10.3	8.8	1.0	7.8
Asparagus	.6	—	5.4	—	.4	—	93.6	.1	.4	2.9	2.6	.3	2.3
Bacon	8.4	62.5	—	—	.5	—	28.6	1.3	7.8	7.8	54.0	4.5	49.5
Barley Meal	12.3	1.8	71.4	—	2.5	3.0	9.0	1.9	5.6	38.7	39.3	6.7	32.6
Beans	20.2	.7	42.6	—	2.5	15.4	18.6	3.2	4.4	25.9	30.0	10.9	19.1
Beef	19.0	14.0	—	—	2.0	—	65.0	3.0	3.0	5.7	21.3	10.2	11.1
" cooked	21.8	8.8	—	—	2.4	—	67.0	3.5	2.5	5.9	18.7	11.7	7.0
" shin	17.0	.5	—	19.0	1.5	—	62.0	7.5	2.6	7.3	19.1	9.2	9.9
Beef-tea	3.1	—	—	—	2.5	—	94.4	.5	.2	.7	1.7	1.7	—
Bones	—	1.3	—	29.4	.6	68.7	—	5.2	2.2	7.5	15.8	—	15.8
Bread	10.0	.7	45.3	—	1.0	1.0	42.0	1.6	3.8	25.9	24.7	5.4	19.3
Broth	.5	—	—	1.5	1.0	—	97.0	.46	.14	.4	1.0	.3	.7
Butter	—	100.0	—	—	—	—	—	—	11.9	14.1	74.0	—	74.0
Butter-milk	3.7	—	—	—	—	—	96.3	.6	.3	.8	2.0	2.0	—
Cabbage	1.2	.1	6.2	—	.7	—	91.8	.2	.5	3.5	3.3	.6	2.7
Carp	18.4	.8	—	—	2.9	—	77.9	2.9	1.4	4.4	10.5	9.9	.6
Carrots	1.1	.3	11.9	—	.7	3.2	82.8	.2	.9	6.4	5.8	.6	5.2
Cauliflower	.1	—	8.1	—	—	1.8	90.0	.02	.58	4.2	3.4	.05	3.35
Cheese	30.8	25.6	2.4	—	4.7	—	36.5	4.9	5.4	11.9	36.6	16.6	20.0
Cherries	.6	—	21.4	2.0	.1	1.1	74.8	.1	1.7	12.9	9.3	.3	9.0
Chesnuts	2.8	—	41.1	—	1.9	—	54.2	.4	3.0	22.0	18.5	1.5	17.0
Chicken	21.6	1.9	—	—	2.8	—	73.7	3.5	1.7	5.2	13.1	11.6	1.5
Chocolate	8.8	38.8	49.2	—	1.8	1.4	—	1.4	8.3	30.7	56.4	4.8	51.6
" (liquor).	.44	2.0	2.4	—	.09	.07	95.0	.07	.43	1.54	2.8	.2	2.6
Cocoa seeds	16.7	53.1	18.7	—	—	6.3	5.2	2.7	8.5	18.2	59.1	9.1	50.0
" nibs	13.3	58.8	23.1	—	2.7	2.1	—	2.13	9.3	20.57	63.2	7.2	56.0
" (liquor)	.5	3.0	1.0	—	—	—	95.5	.08	.4	.92	3.1	.3	2.8
Cod	16.5	.6	—	—	.5	—	80.4	.6	1.5	4.0	0.2	8.0	.4



Cream . . . . .	3.5	4.5	—	—	—	—	—	—	92.0	.56	.8	1.24	5.4	1.9	3.5
Cucumber (peeled) . . . . .	.1	—	1.7	—	.6	97.1	.12	.91	97.1	.02	.12	.91	.75	.05	.7
Currants . . . . .	.9	—	6.8	2.7	8.0	81.3	.6	5.5	81.3	.1	.6	5.5	4.2	.5	3.7
Dates, flesh . . . . .	—	.3	73.4	—	2.3	24.0	—	40.3	24.0	—	4.9	40.3	28.5	—	28.5
" kernel . . . . .	.6	.8	38.9	7.1	39.6	13.0	—	24.1	13.0	.1	3.3	24.1	19.9	.3	19.6
Egg . . . . .	15.0	10.8	—	—	—	71.7	—	4.5	71.7	2.4	2.3	4.5	16.6	8.1	8.5
" white . . . . .	13.9	—	—	—	—	83.3	—	3.2	83.3	2.2	1.0	3.2	7.5	7.5	—
" yolk . . . . .	16.9	29.8	—	—	—	51.3	—	6.7	51.3	2.7	4.7	6.7	32.6	9.1	23.5
Figs . . . . .	5.0	.9	57.0	—	15.0	18.7	—	30.9	18.7	.8	4.2	30.9	27.0	2.7	24.3
Fish . . . . .	16.6	.8	—	—	—	79.7	—	3.9	79.7	2.7	1.2	3.9	9.6	9.0	0.6
Flour (wheat) . . . . .	14.2	1.0	69.8	—	1.3	12.5	—	38.3	12.5	2.2	5.5	38.3	39.0	7.7	31.3
Gooseberries, ripe . . . . .	.9	—	7.0	2.7	8.0	81.1	—	5.66	81.1	.14	.6	5.66	4.2	.5	3.7
" unripe . . . . .	1.1	—	1.9	1.9	8.5	86.4	—	2.3	86.4	.18	.32	2.3	2.1	.6	1.5
Greengages . . . . .	.3	—	26.8	.6	1.2	71.1	—	15.2	71.1	.05	1.85	15.2	10.6	.2	10.4
Green Vegetables . . . . .	1.0	.2	7.8	—	.8	89.5	—	4.34	89.5	.16	.6	4.34	3.9	.5	3.4
Groats, dry . . . . .	4.0	1.2	74.2	—	7.6	13.0	—	37.7	13.0	.6	5.2	37.7	35.9	2.2	33.7
" as gruel . . . . .	4.0	—	59.0	—	24.0	13.0	—	30.1	13.0	.6	4.1	30.1	28.2	2.2	26.0
Gruel (groats) . . . . .	.4	—	5.9	—	—	93.7	—	3.1	93.7	.06	.44	3.1	2.7	.2	2.5
" (oatmeal) . . . . .	1.1	.4	4.0	—	.7	93.5	—	2.3	93.5	.2	.4	2.3	2.6	.6	2.0
Haddock . . . . .	14.6	.6	—	—	—	82.2	—	3.4	82.2	2.4	1.1	3.4	8.3	7.9	.4
Ham . . . . .	35.0	32.0	—	—	—	28.6	—	11.0	28.6	5.6	6.2	11.0	44.2	18.9	25.3
Horse-radish . . . . .	.1	—	4.7	—	16.1	78.1	—	2.46	78.1	.02	.32	2.46	2.0	.05	1.95
Indian Corn Meal . . . . .	8.1	4.5	70.0	—	2.8	13.8	—	36.8	13.8	1.3	5.6	36.8	38.9	4.4	34.5
Kidney . . . . .	21.2	.9	—	—	—	76.5	—	4.9	76.5	3.4	1.6	4.9	12.2	11.5	.7
Lamb . . . . .	19.6	14.3	—	—	—	63.9	—	5.9	63.9	3.1	3.0	5.9	21.9	10.6	11.3
Lard . . . . .	—	100.0	—	—	—	—	—	9.8	—	—	11.1	9.8	79.1	—	79.1
Lentil . . . . .	29.7	—	39.2	—	15.2	14.5	—	26.4	14.5	4.8	4.6	26.4	33.1	16.0	17.1
Liver . . . . .	26.3	3.9	—	—	—	68.6	—	6.4	68.6	4.2	2.3	6.4	17.3	14.2	3.1
Meat (butchers) . . . . .	19.4	14.2	—	—	—	64.3	—	5.8	64.3	3.1	3.0	5.8	21.7	10.5	11.2
" (cooked) . . . . .	22.5	8.9	—	—	—	66.1	—	6.0	66.1	3.6	2.6	6.0	19.2	12.2	7.0
" (gravy) . . . . .	15.0	3.7	—	13.3	7.0	59.6	—	6.1	59.6	5.8	2.4	6.1	17.7	8.1	9.6
Milk (new) . . . . .	5.0	3.5	4.2	—	—	86.7	—	3.6	86.7	.8	1.1	3.6	7.2	2.7	4.5
" (skimmed) . . . . .	2.8	—	3.5	—	—	92.9	—	2.5	92.9	.45	.45	2.5	2.9	1.5	1.4
Mutton . . . . .	21.0	14.3	—	—	—	62.7	—	6.2	62.7	3.4	3.1	6.2	22.6	11.3	11.3
" (cooked) . . . . .	24.9	8.8	—	—	—	63.8	—	6.6	63.8	4.0	2.7	6.6	20.4	13.4	7.0
" (neck) . . . . .	13.0	6.8	—	7.6	14.0	57.2	—	4.0	57.2	4.0	2.2	5.0	16.2	7.0	9.2

\* See note to "Tea."



PER CENTAGE TABLE.--continued.

Food.	Plastic.	Fat.	Saccharine	Gela- tine, Acid,&c.	Mine- ral.	Com- plement	Water.	N.	H.	O.	C.	C. from Plastic.	C. from Respi- ratory.
Oatmeal	15.0	5.8	53.2	—	3.0	9.6	13.4	2.4	5.0	30.6	36.0	8.1	27.9
Onions	.5	—	5.2	—	.5	—	93.8	.08	.38	2.84	2.4	.3	2.1
Oysters	12.6	—	—	—	.2	—	87.2	2.0	.9	2.9	6.8	6.8	—
Parsnips	2.1	—	14.5	—	1.0	3.0	79.4	.3	1.1	8.0	7.2	1.1	6.1
Peaches.	.2	—	21.2	1.8	—	1.9	74.9	.03	1.57	12.6	9.0	.1	8.9
Pearl Barley	4.7	—	78.0	—	.2	7.6	9.5	.8	5.4	39.9	36.6	2.5	34.1
Pears (ripe)	.1	—	9.6	.1	—	3.9	86.3	.02	.6	5.28	3.9	.05	3.85
Peas (dry)	21.9	1.5	46.9	—	2.7	13.3	13.7	3.5	4.8	28.5	33.5	11.8	21.7
Peas (green)	2.7	—	6.6	—	.1	12.5	78.1	.4	.6	4.1	4.2	1.5	2.7
Pigeon	23.0	1.9	—	—	2.7	—	72.4	3.7	1.8	5.5	13.9	12.4	1.5
Pork (fresh)	17.5	16.0	—	—	2.2	—	64.3	2.8	3.1	5.5	22.1	9.4	12.7
Potatoes	1.4	.1	15.7	—	1.1	7.1	74.6	.2	1.1	8.1	7.8	.8	7.0
" (peeled)	1.7	—	23.0	—	1.1	1.6	72.6	.3	1.6	12.4	10.4	.9	9.5
Prunes (flesh)	3.9	—	78.6	—	4.5	—	13.0	.6	5.6	41.7	34.6	2.1	32.5
Pudding (flour)	7.7	7.4	23.3	—	.9	.3	60.4	1.8	3.0	14.0	19.6	4.1	15.5
" (rice)	5.4	5.4	16.3	—	.7	.4	71.8	.8	2.1	10.2	14.0	3.0	11.0
" (suet)	7.1	13.0	34.9	—	.6	.6	43.8	1.14	4.3	20.96	28.6	3.8	24.8
Radishes	1.2	—	7.4	—	1.0	1.3	89.1	.2	.6	.41	3.7	.6	3.1
Rice	5.1	.4	81.7	—	.5	3.3	9.0	.8	5.8	41.4	39.2	2.7	36.5
Rump-steak	21.7	1.9	—	—	2.4	—	74.0	3.5	1.7	5.2	13.2	11.7	1.5
Rye-flour	12.1	2.9	69.6	—	2.6	1.8	11.0	1.9	5.7	37.7	39.3	6.6	32.7
Sole	17.0	.8	—	—	2.5	—	79.7	2.7	1.3	4.0	9.8	9.2	.6
Suet	—	100.0	—	—	—	—	—	—	11.7	9.3	79.0	—	79.0
Sugar (crystalized)	—	—	90.0	—	—	—	10.0	—	5.3	42.3	42.4	—	42.4
Soup (invalid)	4.3	—	2.9	14.1	1.2	—	77.5	3.2	1.5	6.0	10.6	2.3	8.3
Sweetbread	28.0	.4	—	—	1.6	—	70.0	4.5	2.0	6.5	15.4	15.1	.3
Tea (leaf)	4.6	1.7	28.9	26.7	1.7	36.4	—	.74	3.5	27.96	29.7	2.5	27.2
" (sol. etc.)	.5	—	19.0	22.5	1.0	57.0	—	.14	2.2	19.7	20.0	—	20.0
" (infus.)*	.007	—	.32	—	.02	—	99.66	.001	.02	.16	.14	—	.14
Treacle	—	—	75.0	—	—	—	25.0	—	4.7	37.0	33.3	—	33.3
Trout	16.6	.8	—	—	4.3	—	78.3	2.7	1.2	3.9	9.6	9.0	.6
Turnips.	1.2	.2	7.6	—	1.0	—	90.0	.2	.6	4.2	4.0	.6	3.4
Veal	17.7	14.3	—	—	2.3	—	65.7	2.8	3.0	5.4	20.8	9.5	11.3
Vegetable Marrow	.5	—	6.4	—	3.9	—	89.2	.08	.42	3.5	2.9	.3	2.6
Venison	20.4	8.0	—	—	2.8	—	68.8	3.3	2.4	5.4	17.3	11.0	6.3
Vermicelli	47.5	—	38.8	—	1.2	—	12.5	7.5	6.0	29.7	43.1	25.9	17.2



## RECIPES.

(For Analyses, see Table pp. 32-34).

## BEEF-TEA.

Beef (rump steak, minced) 1 lb., cold water 1 lb., macerate two hours at a temperature not exceeding 150° Fahrenheit, to yield 1 pint of beef-tea.

## MUTTON BROTH.

Neck of mutton (fat removed, as far as possible), 1 lb., cold water 2 pints; gently boil six hours to yield 1 pint of broth, from which all fat is to be removed on cooling.

## INVALID SOUP.

Gravy beef 1 lb., scragg of mutton 1 lb., isinglass 2 oz., vermicelli 3 ozs., mushroom ketchup 3 tablespoonfuls, corns of allspice 24, sage a sprig, cold water 3 quarts; put the isinglass and the meat cut small into the cold water, gradually boil, skim well, and then add the other ingredients; simmer four or five hours till reduced to 1 quart; strain through a fine hair sieve, and carefully remove all fat; add salt to the taste. This may be taken cold as a jelly, or warm as a soup.

## PORRIDGE.

Oatmeal 2 oz., water 1 pint. Put the water into a stew-pan, and as it boils dredge in the oatmeal with one hand, and with the other stir with a spoon; turn out into a soup-plate, add salt or sugar according to taste, and pour over it  $\frac{1}{2}$  a pint of cold milk. Eat it with a spoon, mixing the milk and oatmeal together little by little.

## FLOUR PUDDING.

Flour 4 ozs., sugar  $1\frac{1}{4}$  oz., suet  $\frac{3}{4}$  oz., milk  $\frac{3}{4}$  pint, 1 egg. A combination of alimentary principles in nearly exact normal proportions.





## RICE PUDDING.

Rice 3 ozs., sugar 1 oz., 2 eggs, butter  $\frac{1}{2}$  oz., milk 15 ozs., water as much as is sufficient. A combination of alimentary principles in nearly exact normal proportions.

## SUET PUDDING.

Flour 1 lb., suet  $\frac{1}{4}$  lb., water 13 ozs. These quantities, when boiled, yield 2 lbs. of pudding = 32 ozs.

## SUET AND MILK.

Put a tablespoonful of shredded beef-suet into  $\frac{1}{2}$  pint of fresh milk; warm it sufficiently to completely melt the suet, then skim it; pour it into a *warm* glass or cup, and drink it before it cools.

## MILK, WITH RUM, BRANDY, OR WHISKY.

Put 1 tablespoonful of rum, brandy, or whisky into half a pint of new milk, and mix well, by pouring several times from one vessel to another. Bilious persons should heat the *rum*, in a spoon over a lamp, before adding it to the milk.

## PORT WINE JELLY.

Take of port wine 1 pint, isinglass 1 oz., sugar 1 oz.; put the isinglass and sugar into  $\frac{1}{4}$  pint of water, warm till all is dissolved, then add the wine, strain through muslin and set to jelly.

## TEA.

Tea  $\frac{1}{4}$  oz., water 1 pint; stand 15 minutes, yields 18 ozs. tea. (See foot note p. 34).

## COFFEE.

Ground coffee 1 oz., water 1 pint, by percolation, yields 16 ozs. coffee. (See foot note, p. 34).

## CHOCOLATE AND COCOA.

1 oz. to each pint of water.



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1. Isolated (miliary) interstitial tuberculous granulations.
2. Conglomerated interstitial tuberculous granulations.
3. Infiltrated tubercle.
4. Apoplexy of the lung after coagulation.
5. Healed cavities, fibro-cellular cicatrices, and chalky concretions.
6. First stage of pneumonia.
7. Second stage of pneumonia.
8. Second stage of pneumonia passing into the third.
9. Medullary cancer.
10. Hard cancer.
11. Melanoid cancer.
12. Indurated lung, the effect of pneumonia.

LIQUEFACTIONS.—

13. Second stage of acute bronchitis.
14. Chronic bronchitis.
15. Third stage of pneumonia.
16. Second stage of tuberculous disease.
17. Apoplectic coagula in the lung, softening.
18. Apoplexy of the lung before coagulation, with and without laceration.

EXCAVATIONS.—

19. A large empty tuberculous cavity, with reflecting walls, free bronchial communication, and consolidated surrounding lung.
20. A similar cavity containing secretion.
21. A very superficial cavity, full of air.
22. Small tuberculous cavities, beneath a stratum of normal lung.
23. A large tuberculous cavity, beneath a thick stratum of densely-consolidated lung.
24. Emphysema (vesicular).
25. Bronchiectasis.
26. A gangrenous cavity.
27. A pneumonic abscess, partly emptied.

PLEURISY, PNEUMOTHORAX, ETC.—

28. Normal lung, showing the interior of the bronchial tubes.
29. First stage of acute bronchitis.
30. First stage of acute pleurisy.
31. Second stage of acute pleurisy.
32. Third stage of acute pleurisy, compressed and displaced lung.
33. Pneumothorax.
34. The pathological causes and effects of pneumothorax.
35. Emphysema and pneumothorax.



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