HEALTHFUL DIET
FOR
INDIA.

H. CARLSON MENKEL, M. D.

Chandrika Prasad 4/11

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BY

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Most of the recipes contain a serving for six people.

FOREWORD.

It is the writer's ambition to make available in easy language important information regarding food essentials which is otherwise obtainable only from technical medical books and journals. If in this way he is able to help in making life in India more healthful, happy, and efficient for the readers of this book, he will have accomplished his purpose.

Among the authorities upon whose research, writings, and teaching the author has drawn most heavily, should be mentioned the following :—

Col. Walter B. Cannon, M.D., Harvard University.
Professor Russell H. Chittenden, Yale University.
Professor E. V. McCollum, John Hopkins University.
Professor Lafayette B. Mendel, Yale University.
Dr. Harvey W. Wiley, M.D., U.S.A. Government Service.
Dr. John Harvey Kellog, M.D., Battle Creek Sanitarium.
Dr. George Henry Heald, M. D., Editor, "Life and Health."
Professor Irving Fisher, Yale University.
Professor Ivan Petrovic Pavlov, Military Academy of Medicine, Petrograd.
Dr. Eugene Lyman Fisk, M. D., " How to Live."
Department of Agriculture Bulletins, U. S. A. Government.

I hereby acknowledge my indebtedness to my wife, and offer her my formal thanks for preparing the section on " Suggestive Menus," and for rendering other valuable aid in the preparation of this book.

The present volume provides a convenient and popular treatise dealing with the essential scientifically demonstrated food facts, adapted to such conditions and foods as obtain in India.

Barring infectious diseases and accidents, seventy-five per cent of human ailments may be traced to errors in diet and wrong methods of feeding; also to faulty selection and preparation of foods. Therefore, it is very important that we know as much as possible about foods and their relation to health and disease; about the kinds of food best suited to promote health, and about those responsible for physical disorders.

Attention is particularly directed to the chapter on "Big Food Facts" dealing with the newly discovered food factors, Vitamins, and with the important rôle of inorganic food salts. The section on "Suggestive Menus" is intended to provide a selection of wholesome, nourishing, and appetizing dishes, supplying all the elements of nutrition for maintaining a sound mind in a sound body, while discarding such articles of common diet as are responsible for physical discomfort and actual disease.

Some one spoke in the presence of a veteran colonel of the Indian Army about the bad climate of India. "Bad climate ! ! ! " exclaimed the veteran. "There is no better climate in the world; but a lot of young fellows come out here and eat and drink, and drink and eat, and then they die; and then they write home and say that the climate has killed them. Of course lots of people die in India. Tell me where they do not and I will go and end my days there."

H. C. MENKEL,

"Belvedere," Simla.

HUMAN NUTRITION.

The human body is a living machine, so wonderfully constructed and so perfectly adjusted that its operations are largely automatic. Under normal conditions the care of it would be easy, and the laws needing to be observed, few and simple.

Science assures us that as yet no principle within the body limiting life or making necessary decay and death has been discovered. The natural state of man is that rugged, robust condition so characteristic of youth, which we call health. According to biological laws observed in operation, man should enjoy this normal existence for at least one hundred to one hundred and twenty-five years.

The great religious philosophies agree in regarding death as an unnatural experience, having come upon man through his departing from the way of life and health. All agree that the hold of death upon the race may be overcome only by a return to the perfect way, physically, mentally and morally.

One eminent scientist has stated as his opinion, that man does not die but kills himself by abnormal practices and environment. In this connection, the experiments of the famous American surgeon, Dr. Alexis Carrel of the Rockefeller Institute, N. Y., will be of interest. Dr. Carrel separated certain tissues from animal bodies and has kept these tissues alive, separate from the body, for the past twelve years. Not only are these tissues kept alive but they are growing, apparently unchanged by time. These remarkable results have been achieved by periodically washing the tissues free of waste material, and by keeping them nourished in a proper medium.

These experiments suggest that if we could keep the human organism as a whole free from accumulating tissue poison, and

suitably nourished, it would be possible to perpetuate youth while continuing physical and mental progress, for a considerably longer period than the present span of human life.

It has been well said "man is built around his alimentary canal," indicating that what he eats and how he eliminates, very largely determine his state of being. Human nutrition, therefore, takes first place in the essential care of this wonderful body of ours.

The amount of work which one's body is capable of performing daily has been estimated as equivalent to lifting a nine-hundred ton weight to a height of one foot. If this same energy were to be expended solely in walking one would have to walk more than one hundred miles in twenty-four hours. A great portion of this activity is performed by the involuntary functions of circulation, digestion, respiration and elimination, the remainder being accomplished by our voluntary activities of work or play. Man's working efficiency equals one-eighth horse-power, which may be increased to one-fourth horse-power for special efforts.

VITAL ENERGY.

The accomplishment of these activities necessitates the continual converting of body heat into muscle and nerve force. This production of heat energy and its expenditure in muscle and nerve force is like the continual burning of a very large candle. In scientific nomenclature the daily amount of energy required is expressed as 2,500 calories for a man weighing one hundred and fifty pounds.

A calorie is the unit for measuring heat as an anna is the Indian unit for counting money. One calorie is the amount of heat required to raise one pound of water approximately four degrees Fahrenheit.

Heat production, whether within or without the body, requires the burning of something. The same amount of heat is produced by oxidising or burning a given quantity of food substance either within or without the body. The exact heat-equivalent of all foods has been ascertained by oxidising given quantities in an instrument known as an electric calorimeter.

By equally scientific measures the exact daily consumption of body substance resulting from physical and mental exertion, has been ascertained to equal one-eightieth of the body weight. The object therefore of daily intake of food and water, should be to replace this loss of substance and energy, in as nearly exact quantities and proportions of elements as possible.

Through application of information now available regarding the human organism, its food and feeding practices, we are enabled to plan a very nearly normal regime, and to ensure a definite extension of life and health. Care bestowed upon the body is a gilt-edged investment, yielding positive returns.

Physical Fitness.

An important gauge of one's physical fitness is to be found in the net body weight. The experience of life insurance experts has demonstrated that the relation of weight to age has an important influence on longevity. At normal weight, if the individual is fairly healthy, the body is in the most favourable condition for all functions to operate normally.

Overweight, especially after the age of thirty-five, is more unfavourable than underweight, and should cause one to adopt regular habits which tend to keep the body weight at normal. The Weight Chart on page 4 will be found helpful in ascertaining what the weight should be for a person of given height.

Table Showing Height, Weight and Number of Calories of Food Elements Needed Daily.

Inches Height.	Pounds Weight.	10 % Proteins.	30 % Calories Fats.	60 % Carbohydrates.	Total.
		MEN.			
61	131	197	591	1,182	1,970
62	133	200	600	1,200	2,000
63	136	204	612	1,224	2,040
64	140	210	630	1,260	2,100
65	143	215	645	1,290	2,150
66	147	221	663	1,326	2,210
67	152	228	684	1,368	2,280
68	157	236	708	1,416	2,360
69	162	243	729	1,458	2,430
70	167	251	753	1,506	2,510
71	173	260	780	1,560	2,600
72	179	269	807	1,614	2,690
73	185	278	834	1,668	2,780
74	192	288	864	1,728	2,880
75	200	300	900	1,800	3,000
		WOMEN.			
59	119	179	537	1,074	1,790
60	122	183	549	1,098	1,830
61	124	186	558	1,116	1,860
62	127	191	573	1,146	1,910
63	131	197	591	1,182	1,970
64	134	201	603	1,206	2,010
65	139	209	627	1,254	2,090
66	143	215	645	1,290	2,150
67	147	221	663	1,326	2,210
68	151	227	681	1,362	2,270
69	155	232	696	1,392	2,320
70	159	239	717	1,434	2,390

This table of heights and weights gives the average standard for persons over thirty years of age. The findings of science and the experience of Life Insurance Directors indicate that adults over thirty years of age should endeavour to maintain the normal weight for those of thirty. Before the age of thirty-five, the lowest mortality is found among those who weigh a few pounds over the average for their age. After the age of thirty-five the lowest mortality is among that group whose weight approximates the normal for thirty years of age or a few pounds under that. This would indicate that increasing weight with advancing age is a real handicap.

BIG FOOD FACTS.

One generation ago, knowledge regarding foods was limited to the observation that some foods agreed well, while others disagreed with certain people. To-day we know the big essential facts of each food substance.

Man is an energy-consuming organism. This energy is not inherent within the body, but must be introduced daily by means of the food eaten. Unlike the plant kingdom, man is not able to gather his supply of energy direct from nature, that is, he cannot appropriate properties direct from sun, air and earth, but he must depend upon the vegetable kingdom as the medium through which to receive the needed energy in an organised form.

The plant is an energy-storing organism. It has the power to absorb inorganic elements from nature and after organizing them into various combinations such as proteins, starches, sugars, fats, salts and vitamins, they become part of the plant structure so organized as to supply the various food requirements of the animal kingdom. The vegetable kingdom constitutes nature's great storehouse of latent energy, ready to be liberated as kinetic or vital body-force through the wonderful alchemy of digestion.

Classifying Foods.

Food stuffs are classified according as these organized elements (protein, starch, sugar, fat) predominate in their structure.

Proteins.

Under the head of protein or albuminous foods, are those in which nitrogen enters prominently into the combination, for example: meat, milk, cheese, eggs, *dal*, beans, peas and nuts. Cereals, or seeds (grains), such as wheat, rice, etc., contain a moderate amount of protein in the form of gluten. Lean meat is nearly all protein, as it is so largely built up of this

nitrogenous element derived from the vegetable kingdom. Protein is the essential tissue-constructing material, as, from it, the body builds up its living structure of muscle, nerve, glands, etc. This brings us to the consideration of one very big food fact discovered within recent years.

Proteins Differ.

It is now known that there are two kinds of proteins "complete" and "incomplete," a classification based upon the composition, and consequent food value, of the protein molecule. This molecule is very complex, and may consist of various combinations of amino-acids, or what may be termed "building stones," of which eighteen are known. The particular protein foods which contain all eighteen of these amino-acids in their composition are known as "complete," for they contain exactly the elements needed to construct nerves, muscles, glands and other nitrogenous tissues. In consequence of their compatibility to the body requirements they are wholly utilized in tissue-building. The only known foods containing in themselves "complete" protein are milk, eggs, meat, nuts and *soya* beans.

Other articles used as foods are found to be lacking in one or more amino-acids and are therefore "incomplete" to the extent of this lack, which ranges from 10 to 90 per cent. Under this second head of "incomplete" protein foods are included all cereal foods, pulses, vegetables and fruits.

It is apparent, therefore, that the first list suggests a ready source for securing the daily protein requirement. Any one of the five foods mentioned in that list is sufficient to provide perfectly all the protein needed for growth and tissue reconstruction.

This knowledge has added new interest to certain observations of practical experience. It is well known that for various

reasons many persons prefer to abstain altogether from flesh foods. Under these circumstances, where meats have been replaced in correct quantity by some such complete protein food as eggs, milk, nuts, or *soya* beans, all has gone well. Others have chosen rather to secure their food entirely from the vegetable kingdom, the diet then consisting of some combination of cereals, pulses, vegetables, fruits and nuts. Here one meets with varying results. In some cases the combination used has given evidence of supplying complete nutrition while in others there are distinct signs of deficiency. The recent more exact knowledge regarding all foodstuffs has explained this difference in results, and has indicated that the way to obviate any such deficiency is by combining at each meal protein foods which are complementary to each other in their amino-acid content.

We may illustrate this as follows: If we have the word *Print* in blocks, and with the available letters attempt to make the word *Protein*, we find the O and E missing, and we can only make *Prtin*. If then we secure another word in block, *Poem*, we can with the O and E now available complete our word *Protein*. Allowing each letter to represent an amino-acid, we have an illustration of the fact that with an incomplete protein it is impossible to build up a complete tissue protein, and also of the fact that one incomplete protein may be used to supplement the lack of another, the two together supplying the amino-acids required for constructing a complete tissue protein. It may readily be understood that it will take a greater variety of the incomplete protein foods to satisfy the body's need for amino-acids, than of complete proteins, for the reason that the former are complete only to the extent of 40 per cent, 25 per cent, or even as low as 10 per cent of their total protein content.

Nearly all proteins of vegetable origin are incomplete in themselves, but may be so combined as to complete each other and provide an efficient ration. The protein of the peanut (China *Badam*), the almond (Kabuli *Badam*), and other nuts, has been shown to be of high quality, practically equal to that of flesh. It is to be noted also that the protein of milk, cheese or eggs is fully equal to that of meat in quality. When meat is discarded, it is evidently necessary that care should be taken to supply in its place an adequate amount of protein derived from one of the above sources.

Any of the following combinations provide an efficient protein complement :

Cereals (seed foods) with pulses and green leaves of food plants.

Cereals (seed foods) with either milk or eggs.

Cereals (seed foods) with gelatin.

Cereals (seed foods) with nuts or *soya* beans.

Oats with gelatin, or peas, or milk.

Pulses with nuts, or milk, or cheese (milk curd) or eggs.

Amount of Protein Required.

On account of the importance of the protein element in human nutrition some have concluded that man's daily food supply should consist largely of highly nitrogenous foodstuffs. This has proved to be a very serious mistake. Excessive use of protein foods is the active cause responsible for a high percentage of early physical failures and deaths.

The actual amount of tissue requiring to be replaced each day is very small, therefore the need for a large supply of this element is not apparent. According to the best authorities, not more than ten to fifteen per cent of the total daily food intake should consist of protein. An excess of this amount cannot be utilised in the designed way, for tissue building, nor is there any

provision of nature to store this excess in the body for future need. *It must be eliminated.* If this were only a matter of being discharged from the body as so much excess material, representing at its worst, financial extravagance, the mistake would not be so serious. But there are other considerations.

The over-supply of protein must pass through all stages of the digestive process, requiring about twenty-four hours for its completion. During all this time and at every step of the process, an unnecessary and detrimental strain is put upon the delicately adjusted functions and organs of the human body.

The final step in this digestive process is the chemical reduction of the protein molecules into their component amino-acids or " building stones," for it is in the form of amino-acids that the protein element becomes useful as tissue building material.

Once a house has been completed there is need for only a small quantity of building material thereafter for maintaining essential repairs. The same is true of the body after it has reached mature development; thenceforward only a small quantity of " building stones," *i. e.*, proteins, is required to replace the small daily tissue loss. An excess over the actual needs for this food element clogs the machinery much as excess of carbon clogs the motor engine or clinkers choke the fires of a boiler, and the result is lowered efficiency and a shortened life.

During the process of protein digestion, a great amount of by-products in the form of waste material, acid " ash," and " purins " is formed. This waste material must be disposed of through the liver and kidneys. An occasional excess would doubtless be cared for without harm to these organs, but not so when the excess strain is habitual. But this is not all. These " purin bodies " are the mother-substance from which uric

acid is formed. The dangers and evils resulting from an excess of uric acid in the system are quite well-recognized. It is to be regretted that the cause of uric acid formation is not equally well known. To prevent the excess of uric acid it is essential to avoid excessive intake of this protein element.

It should be kept in mind that the amount of protein food required daily by each individual is quite constant, the variable food factors being carbohydrates and fats. This makes the choice of diet easy. Having ascertained his individual protein requirement, and having selected the particular "complete" protein foods from which this element is to be derived at any given meal, the remainder of the meal should then be made up of cereal, fruit and vegetable dishes.

Four or five ounces of such complete protein foods as pulses, peanuts or almonds will provide for an adult an abundance of protein for an entire day's ration, and may be divided into two or three meals according to preference; but half this quantity of the above-mentioned foods will suffice if used to supplement other proteins of an ordinary varied diet from which meat is wholly excluded. Three quarters of a seer of milk or two eggs will serve equally well to supplement an ordinary day's ration otherwise consisting exclusively of non-flesh foodstuffs. Children require proportionately more protein food daily than adults as their bodies are still undergoing construction.

With only a little application and familiarizing of food values, the balancing of one's diet becomes as simple as working an ordinary sum in addition.

CALORIES MADE EASY.

A better understanding of the fuel value of foods may be gained by a more concrete example. The amount of food ordinarily taken at a single serving by the average European, has been found to contain approximately 100 calories or energy

units. It will help us, therefore, in finding the energy producing value of any given meal, if we accustom ourselves to estimating our foods in servings of one hundred calories each. By totalling the number of servings taken at a meal or during the day, one arrives at the total food value consumed. Thus we find roughly one hundred calories in each of the following quantities of indicated foods : in a large egg (2 ounces) ; in three ounces of *dahl* ; in three ounces of baked beans : in $1\frac{1}{2}$ cubic inches of cheese (about one ounce) ; in one large-sized potato (if baked 3 ounces, if boiled 4 ounces) ; one ordinary thick slice of bread ($1\frac{1}{2}$ ounces) ; in six ounces of oatmeal porridge ; in a small lamb chop (one ounce) ; a small piece of sponge cake (one ounce) ; in three teaspoonsful of sugar ; in twelve pea-nuts ; in four prunes ; in two apples ; in one large Bombay plantain (4 ounces) ; in seven olives ; in one very large orange ; one ordinary cube of butter ($\frac{1}{2}$ ounce) ; in two ounces of cream ; in a small glass of milk (5 ounces) ; in four ounces of cooked macaroni. (For the exact quantity of proteins, fats and carbohydrates contained in each food portion see Table of Food Values on page 153).

CARBOHYDRATES AND FATS.

As the human body is much like an engine, its chief requirement is fuel to supply power in the form of heat and energy. This fuel food consists of carbohydrates—starch and sugar—found in cereals, vegetables, fruits and nuts; also in the form of fats, such as butter, cream and oil.

From 85 per cent to 90 per cent of the total food elements in the daily diet should consist of carbohydrates, mineral salts, and fats. The proportion of carbohydrates and fats to each other may be left to personal preference, although it is considered by most dietitians that a good proportion is 60 per cent of carbohydrates and 30 per cent of fats; the remaining ten per cent being protein.

Each ounce of carbohydrate, when oxidized in the body, yields one hundred and sixteen calories of heat; while fat yields two hundred and sixty-four calories per ounce.

The daily fuel requirement of the average individual weighing one hundred and fifty pounds and doing moderate work is 1,500 calories of carbohydrates, 750 calories fats, and 250 calories protein; in all 2,500 calories per day.

Very hard muscular work calls for an increase of foods up to ten per cent, but contrary to popular opinion, hard brain work does not call for a material increase of food.

Carbohydrates when properly masticated are easily digested, readily absorbed and completely transformed, within the tissues into heat and muscle force, and hence, it is to these food elements we should look for our main support of the body's work.

Recent studies of carbohydrates show that starches differ in their structure and digestive requirements. The starch of wheat, rice, potatoes and other carbohydrate foods, differs

each from the other. It has been observed that starch digestion is best promoted by partaking of one class of starch food at a meal.

In persons of weak digestive powers the combining of two or more kinds of starch foods at one meal usually results in one of the starches being selected for digestion, while the others undergo fermentation, producing sour stomach, belching, flatulence and other forms of acid digestive disorder.

During the digestive process starches are combined with alkaline materials derived from the salts found near the inner bran covering of cereals, from non-starchy vegetables and from non-acid fruits. Thus emphasizing the necessity of such food forming part of the carbohydrate meal.

Any starches not so combined with alkalines during digestion become acid in the body, accounting no doubt for the prevalence of starch-acidosis as found in India.

Nervous irritability, over-stimulation, and neurasthenia are phases of starch acid poisoning which may develop in nervous people from over-eating of starch foods and particularly from mixing starch and sweets together at the same meal.

The foods in which carbohydrates predominate are: breads, rice, porridge, cakes, fruits, sweets, and all cereal preparations; potatoes and other succulent vegetables. Such food as nuts, *dal*, lentils, beans, peas and tubor vegetables also contain a good percentage of carbohydrates.

Fats predominate in cream, butter, *ghee*, milk, yolk of eggs, nuts and olives.

Does artichoke flower contain starch or is it a non starch vegetable?

INORGANIC SALTS.

In addition to the organic elements already mentioned—proteins, carbohydrates, and fats—there are several other factors just as essential in maintaining proper physical condition. These additional factors are the inorganic salts represented by the ash residue of food burned. This non-combustible ash of food is called "inorganic salts," "inorganic food stuffs," or "mineral salts," and consists of comparatively simple chemical substances such as soda, potash, lime, magnesia, iron, phosphates, iodine, sulphur, etc.

The importance of these inorganic elements in maintaining the proper health balance will be better understood by recalling their uses in the chemistry of nutrition.

The more recently developed knowledge of nutrition has cleared some of the haze of uncertainty surrounding the underlying cause of many chronic and stubborn diseases.

Within the human organism two processes are taking place,—constructive and destructive. "Man begins to die as soon as he is born." This refers to the process of tissue disintegration resulting from all of the normal functional activities. The final result of this process is an acid ash. Under certain functional disturbance this acid ash by-product is abnormally increased and tends to produce an acid degeneration of the living tissues.

Acid means death to the cell organism. The body tissues must function in an alkaline environment. Therefore the constructive process of nutrition works with alkaline materials and results in building up a strong alkaline reserve within the organic cell structures and blood.

In health the balance between acid and alkaline, the constructive and destructive processes, is readily maintained and all goes well, the individual feeling at ease, full of ambition and energy.

Nature has provided well for her alkaline needs in the form of sixteen alkaline mineral salts to be found abundantly in the foodstuffs coming from the vegetable kingdom. These mineral salts, as found in vegetables and fruits, are in the form of coloids of gelatinous consistency and are therefore exactly suited to supply our alkaline requirements.

If the alkalinity of the blood and tissues is reduced ever so little by the absence of one or more of these sixteen alkaline mineral salts, the result is a condition called by medical men "acidosis," meaning a deficiency of alkaline reserve with varying symptoms differing according to which of these salts are missing.

Professor McCollum of John Hopkin's University with his famous sixteen groups of rats and mice has been able to produce in them practically all the so-called chronic diseases of man, by withholding from each separate group, in their diet a different one of the sixteen alkaline salts which should be contained in a perfectly balanced dietary.

These inorganic food salts like potassium, soda, lime, magnesia, silica, phosphorus, chlorine, iron and sulphur become united within the body in definite proportion with organic matter to form the various cells of the living body.

Mc Collum has shown that these small animals with which he is working do not thrive well on some of the very foods on which we feed our children, and on which we are daily dependent ourselves. These observations reveal that our resistance or susceptibility to various infectious and chronic diseases is determined by the nutritional balance of our individual tissue cells. Particularly is this balance influenced by the presence, or absence, of the full complement of the sixteen alkaline salts and the three classes of vitamins, all of which are prepared for our needs in the vegetable kingdom.

We are finding that a considerable list of diseases with varying names, according to the most prominent symptom, may all be classed under the head of "mineral starvation." The mineral reserve of the body has been depleted and as a result functional order has become impossible.

The causes of this "demineralization" of the tissues are not difficult to find. The first cause is failure to provide freely the alkaline-supplying food factors as found in vegetables, fruits, and cereals. Much more of green vegetables and fresh ripe fruits should be eaten. The vegetables must be prepared so as not to throw away any water in which they have been cooked; and some fresh, raw green stuff, as salad, eaten daily. Cereals, as wheat and rice, should be so prepared as to retain their mineral element which is lost in the milling process of making fine white flour and polished rice. Fine white flour and polished rice are largely demineralized and are therefore deficiency foods. Tuberous vegetables like potatoes are better if prepared without peeling.

Excess of bread stuffs favours acidity and such foods should therefore be used sparingly by the acid-inclined individual. Flesh foods are the chief acid-producers and are "alkaline robbers", using up the essential alkaline reserve in the body's effort to neutralize their dangerous acid products. Experience has taught the necessity of limiting meats in most chronic ailments. We now understand more fully why this is necessary.

Constipation and absorption of acid intestinal content is a third factor in demineralization. This must be corrected.

It will be evident from the above that in "acidosis" the chief factors are failure to furnish an adequate supply of alkaline mineral salts and to prevent their excessive loss. Therefore:

Restrict all foods that tend to produce acids;
Increase alkaline-containing foods;
Prevent intestinal stasis;

Drink freely of water to help eliminate excessive wastes ;
Insure fresh air at all times to support oxidation.

In addition to the above dietary measures it is often necessary for a time to take a combination of inorganic mineral salts to help in conserving and building up the mineral reserve of the tissues. Mineral metabolism or mineral digestion, is largely under the control of a group of glandular structures located in different parts of the body. These include the parathyroids, the spleen, the liver, the thyroid, and probably also the sex glands as these have much to do with general tone. The functional lagging of such glands is an additional cause of mineral starvation. Whenever these glands are working below par, the effect is the same as that of an insufficient supply of alkaline elements, for minerals are then allowed to pass out of the system without being appropriated. Thus mineral or alkaline shortage is produced.

In such cases it is sometimes useful to use extracts of the involved glands in tablet form, made from animal (sheep) glandular structures and taken daily for several months. The writer has seen very definite benefit derived therefrom.

As these glandular mineral workers are wonderfully influenced by the wave lengths and rate of vibration found beyond the violet band of the light spectrum, therefore we make use of this ultra-violet energy as produced by the mercury-vapor quarts generator for stimulating glandular activities, beginning with an exposure of only a few minutes and gradually increasing the time. Other forms of short wave length energy produced in an electromagnetic field, are also used for re-establishing basic cellular imbalance.

VITAMINS.

Vitamins is the name given by Funk, a Russian scientist, to certain, as yet not well-defined ammonia-like substances, which have been found in the skin or coating of grains, particularly rice, in the yolk of eggs, and also in raw milk, fresh fruits and fresh vegetables; especially peas, beans, tomatoes, oranges and lemons.

These vital components have been called protective substances from the fact that their absence from the diet is certainly responsible for such definite conditions as beriberi, scurvy, and neuritis.

Recent investigations seem to show that a lack of vitamins results in lessened nutrition, a decreased resistance to germ infection, swelling and soreness of the joints, irritation of the eyes, bleeding of the gums with looseness of teeth, and general debility and weakness. Rickets in young children is believed to be due to a lack of these elements in the diet.

Three classes of vitamins have thus far been recognized and named: Fat soluble A; Water soluble B; Water soluble C.

In the discovery of vitamins we have another of Nature's great secrets revealed to us, and incidentally an important lesson on diet is emphasized. In those foods which are most natural, nature has associated with the nutritional elements these minute protective substances, as if to reward man for maintaining right practices in diet.

For the purpose of securing these protective substances, milk, eggs, cereals, fruit, raw and cooked vegetables, in right combination and properly prepared, should constitute the regular daily diet.

There are doubtless still other, as yet unrecognized, compensations in nature for conforming to her laws. Happy is the man who physically as well as morally enjoys doing right for right's sake.

"A" Fat soluble Anti-rachitic		"B" Water soluble Anti-neuritic		"C" Water soluble Anti-scorbutic	
Food Source	Deficiency Results in	Food Source	Deficiency Results in	Food Source	Deficiency Results in
Butter. Cream. Whole milk Egg yolk. Greens. Carrots. Cabbage. Tomatoes. Alfalfa. Clover. Cod-liver oil.	Malnutrition. Abnormal mineral metabolism Rickets. Eye disease. ——— Not damaged by ordinary cooking or canning.	Whole grains. Cereal germs. Bran. Nuts. Vegetables. Fruits. Egg yolk. Milk. Yeast. Yeast extract.	Retarded growth. Loss of appetite. Malnutrition. Beriberi. Polyneuritis. ——— Not damaged by ordinary cooking or canning.	Fresh fruit orange lemon grape fruit tomatoes (also canned), Vegetables (fresh and uncooked). Sprouts. Greens. Raw summer milk.	Malnutrition. Retarded growth. Decay of teeth. Scurvy-infantile or adult. ——— Easily destroyed by cooking or drying.

The above classification of vitamin might be further subdivided for technical accuracy, by adding fat soluble "D" and "X" as advocated by certain investigators, but the arrangement into three groups will be found convenient and easy of application as a practical working formula.

DIETARY OBSERVATIONS IN INDIA.

The people of India in their penury have been obliged to learn some of the essential lessons of life in the school of experience. The meagre wage of eight annas to one rupee per day, which must often be drawn daily and judiciously spent to meet the needs of an ever-increasing family, has necessitated a knowledge of the daily ratio of food required to sustain life and maintain working strength. The results thus gained in this practical school of life have been so universally recognized throughout India, that practically every man or woman is prepared to tell the quantity of carbohydrate, protein and fat required daily, per individual, in terms of rice, *dal*, milk, vegetables and oil or *ghee*. These quantities vary slightly in different sections of India, but approximately they are as follows:—

Pulses (*dal*)	.. 8 ounces.
Rice	.. 1 pound.
Wheat Flour ..	.. 1½ pounds.
Ghee (melted butter) or oil ..	.. 3 ounces.
Milk	.. 8 ounces.
Vegetables	.. 4—8 ounces.

The Mohammedan often substitutes six ounces of meat for the *dal*. This food ration is usually divided into two meals, one in the morning and the other at night when the day's work is ended. On such a diet the farmer toils all day in the field, and the coolie performs his arduous task of heavy burden bearing, often carrying loads of from two to three maunds in weight.

The majority of people in India subsist upon a non-meat dietary, or use meat only on special occasions. However, the composition of this "vegetarian" dietary varies greatly in different sections of this country. Likewise also do the physique, resistance to diseases, and longevity of the people differ decidedly.

Lieut.-Colonel Robert McCarrison of the Indian Medical Service writes: "Few who have travelled far in India can have failed to notice the remarkable difference in physical efficiency of different Indian races. So great is the contrast between certain stalwart, vigorous, and resolute people of the North and certain poorly developed and toneless inhabitants of the South and East, that the question arises: Why should there be these great differences between one race and another?"

India has served the world as an important nutritional observation laboratory, conducted on a large and varied scope with very definite findings. The chief foods forming the dietary of India's millions are rice, wheat, barley, maize, millet, legumes, vegetables and fruits. The food used most sparingly by the people, and not at all by great masses, are milk and milk products, eggs and flesh meat.

Cereals, pulses, and fats form the staple basic foods of India. According to modern food evaluation these foods are lacking, by being incomplete in their protein factor. Some cooked vegetables and fruit are usually added in the form of curry, but not sufficient to balance the amino-acid lack of the protein.

When the cereal used is polished rice as in parts of Bengal and South India, there is in addition a mineral deficiency, especially in calcium, sodium and chlorine, as pointed out by McCarrison. The vitamin factor is also very defective in this dietary practice.

The people of Behar and Orissa, Bengal and South India, in their poorer physique and lower resistance to disease, reveal the effects of a deficient diet.

As one goes north the dietary of the people changes. Wheat replaces rice, and vegetables and fruits, both raw and cooked, are used more freely. Milk and milk products enter more largely

into the diet. Flesh food in small quantity may also be added by Mohammedan and Sikh.

The result of these dietary differences in North India has been well described by Colonel McCarrison in this extract from **The Practitioner** : " . . . a truth which finds ample illustration in the diets made use of by the Sikhs, the Pathans, and certain Himalayan tribes, than whom it would be difficult to find races, whether in the East or in the West, of finer physical development, hardihood, and powers of endurance.

" The high degree of physical efficiency of the Sikhs is attained on a diet of wholemeal bread, legume seeds, tubers and roots, vegetables and clarified butter, supplemented with liberal amounts of cow's, buffalo's or goat's milk (whole milk, butter milk, and curds). Beef is never eaten by them, but goat's flesh, mutton, and game, are eaten occasionally, although not in large quantities."

As to the ability of the non-meat eating people of India successfully to endure severe surgical operations, the following statement from Lieut.-Colonel H. Hallilay, I.M.S., Civil Surgeon of Amritsar, will be sufficient evidence :

" I claim to speak with some authority on this subject because I have been practising surgery in India for the last twenty-four years, and had an admirable opportunity of comparing the relative resistance of meat-eaters and vegetarians during the Great War. I was a Surgical Specialist in charge of Indian troops for the greater part of the war.

" . . . There was a remarkable consensus of opinion from all who had served with both races and classes, that the Indian wounded healed more rapidly, were less amenable to infection, and recovered from infected wounds more readily than did the French, British, and Australian troops.

"In civic life they show a remarkable freedom from certain diseases, such as gastric and duodenal ulcers, gall-bladder disease, and appendicitis.

"As regards the latter, I have some figures relating to the relative incidence of appendicitis in Indian and British troops respectively, in India. I find that this disease is about ten times as frequent in the British as compared with the Indian Army. The rarity of cancer is so striking that a surgeon might practise for many years amongst this people and never see a case.

"I am speaking for the Punjab, not for India as a whole. The Punjab diet is wheat bread, wholemeal, pulses, vegetables, milk and some fruit.

"I may add that their physique will compare favourably with that of any people in the world. When it was decided after the Boxer rising to recruit a regiment in the Punjab specially for service in Hong Kong, there was no difficulty in raising a thousand men of an average chest measurement of forty inches and an average height of five feet eleven."

The following is from Doctor Edith Brown, one of India's leading woman surgeons, and head of the Women's Medical College of Ludhiana: "I consider that the Indian women stand major operations well, and . . . the Hindus, who do not eat meat, stand this quite as well as the Mohammedans. We do a fair number of major operations in the year (over two hundred and fifty abdominal sections) and we very seldom lose any from shock, while one marvels often at their recovery from desperate conditions as ectopic gestation and pyosalpinx."

From these observations one must conclude that, so far as nutritional defects are concerned, the fault is not with absence of meat, but rather with the incorrect balancing of the various nutritional factors that are abundantly supplied by the non-meat dietary of India, but are not correctly combined in large sections of the country.

The food combination used in the dietary of Northern India has proven to contain the essentials for a well-balanced nutrition and prolonged life. Using this diet as a standard an effort should be made through educational propaganda to introduce the use of wholemeal bread, more good milk, fruits and raw leafy vegetables, into the dietary of other sections where the elements which these foods supply, are lacking.

This matter of faulty balance of food materials with its disastrous results, and correcting this condition by introducing foods supplying the missing elements, is a very practical way of solving some problems basic to India's welfare. Such interests are well worthy the attention of Indian National Organizations.

FLESH FOODS.

Animal flesh is still considered by many as the most important article of diet. This idea is often accepted without question, or without a thought that it can be seriously challenged. A careful consideration of the subject, however, will soon show that in addition to its known nutritive values, there are dangers and after-effects which considerably detract from its position as a superior food substance.

The first danger in the use of meat as a regular article of diet is an excessive consumption of protein above the actual requirements for tissue reconstruction. As has already been pointed out, this places upon the liver and kidneys an undesirable tax, as all excess of protein must be reduced to uric acid before it can be eliminated. There being no provision for storing excess of protein or its digestive products, the presence of these in the blood is a definite harm until it can be eliminated. This flooding of the system with an excess of by-products leads to early impairment of the vital functions concerned with taking care of the excess.

The next danger from a flesh diet lies in the readiness with which flesh foods undergo decomposition and putrefaction.

There are myriads of germs constantly present in the human intestine. These germs are divided into two classes, fermentation or acid-forming, and putrefaction or poison-forming germs. The action of these latter germs gives rise to the very offensive smell emanating from a dead animal. When these same germs feed upon animal flesh in the human intestine they give rise to such highly poisonous toxins as skatol, indol, pyrrhol. Some of these closely resemble the venom of snakes and are capable of producing grave and distressing symptoms.

Through the use of meat the growth of these putrefactive germs is greatly encouraged, giving rise to very offensive stools, which indicate intestinal intoxication.

To make matters worse, flesh foods are inclined to induce constipation with a retention of these foul substances in the body. The result of constipation, with a bowel laden with putrescent matter is, colitis, so-called biliousness, gastritis, or, frequently, inflammation of the gall duct with formation of gall stones, also appendicitis. Nature undertakes to relieve the blockade by absorbing and sucking up into the blood as much of the soluble bowel content as possible, and eliminating these by way of the lungs, kidneys and skin.

Through the absorption of these intestinal toxins into the blood, all the tissues of the body are bathed in this poison-defiled stream. Thus what normally is a true river of life becomes a source of disease and early death.

This poison saturated condition of the body is known as autointoxication and the characteristic symptoms are, a coated tongue, a sallow complexion, large circles around the eyes, the appearance of brown spots on the hands or other parts (the so-called liver spots), offensive breath and perspiration, putrid stools, thin, inelastic parchment-like skin, dullness of mind, mental irritability or depression without apparent cause, cold hands and feet, perspiration of the hands and feet, chronic headache, attacks of migraine or sick headache; these, and a score of other symptoms are indications of chronic poisoning. By prompt attention at this stage it is possible to prevent the development of the later more serious conditions, such as hardening of the arteries, Bright's disease with albumin and casts in the urine, or apoplexy with paralysis.

It is well to remember that such symptoms of autointoxication do not appear until the mechanism of the body for destroying and eliminating poisons has already become impaired and is failing to accomplish the designed purpose. Therefore, the appearance of symptoms indicating autointoxication should receive serious attention.

The ill effects of a flesh diet may not be immediately realized, but this must not be taken as evidence that it is doing no harm. Few can be made to believe that it is the meat they have eaten which is largely responsible for physical degeneracy, and many die of diseases wholly due to flesh diet, while the real cause is not suspected by themselves or by others.

Disease among Animals.

Those who use flesh foods know little of what they are eating. Often if they could see the animals while living and know their condition, they would turn from the flesh with loathing. People are continually eating flesh that is filled with tubercular, cancerous and other germs. Many contract disease from this source. Animals are actually taken to market and sold for food, when they are so diseased that their owners fear to keep them longer.

In his book "Sanitation in India," Dr. Turner, the Health Officer of Bombay, says: "Tuberculosis is a very widespread disease in man and animals, it is very common in cattle and poultry." "Comparative statistics show that the disease occurs in cattle 16—25 per cent. Birds are specially susceptible, the disease causing great mortality in hens, geese, turkeys and pheasants. Most wild animals are susceptible." Referring to the resistive power these germs possess to survive the usual treatment of flesh in its preparation for food, he says: "Their resistance is considerable and they can retain their vitality outside the body for a considerable time. Salting and smoking do not kill them. They resist the gastric juice for six hours, and a temperature of 3°C. for 3 hours and drying and putrefaction for a very long time, even months."

Cattle taken from green pastures are driven many weary miles over hot plains and dusty roads, often deprived of food and water for hours; exhausted and feverish they are driven to their

death. Flesh under such conditions is saturated with tissue poisons and wholly unfit for human consumption.

The tissues of swine swarm with parasites. These animals are scavengers, and this is the only use they are fit to serve. It is impossible for the flesh of any living creature to be wholesome when filth is its natural element, and when it feeds upon every detestable thing. Never should their flesh be eaten by human beings. Trichinosis is a disease contracted by the use of infected swine's flesh, the disease being due to a little worm found in the flesh of swine. In man it produces an acute condition which may be mistaken for rheumatic or even enteric fever.

In many places fish become so contaminated with the filth on which they feed as to be a cause of disease when eaten. This is especially so when fish come in contact with the sewage of large cities. Fish, after feeding on the drains from cities, may pass into distant waters, and may be caught where the water is fresh and pure. Thus, when used as food, they may bring disease and even death on those who do not suspect the danger.

The relation of effect to cause is certainly indicated by the almost *pro rata* increase of diseases like tuberculosis and cancer among man, and such food animals as cattle, poultry and fish. It is highly unsafe to depend upon animal flesh as a source of protein food. We should become more familiar with the use of grains, nuts, fruits and vegetables, because these, when prepared with milk and eggs, provide a far better and cleaner diet than animal flesh.

For individuals so situated that they cannot adopt an entire non-flesh diet, it is well to know that the actual daily protein requirement is amply supplied by one usual helping of meat, fish, or fowl, preferably at the mid-day meal, with one or two eggs in the morning. Fish and fowl must be included in the same class as meat, their effects being the same.

VEGETABLES.

About three hundred varieties of vegetables are known, but less than fifty are habitually used as food.

The average market in India, especially in or near the larger centres, usually offers a variety of very good vegetables. Where at all possible, persons living out in the districts would do well to grow a small garden of fresh vegetables. If no land is available one can even grow certain green vegetables in boxes, thus providing oneself with the valuable health-preserving properties of these natural foods.

LEGUMES.

Such seeds as *dal*, beans and peas are especially rich in albuminous or protein elements, the proportion being about twice that of wheat, and fifty per cent greater than beefsteak. They also contain a liberal supply of carbohydrates and salts.

By depending upon these foods for a good part of the protein supply, rather than upon flesh foods, one gains an additional advantage due to their alkaline base-forming properties. These base-forming properties aid materially in counteracting the tendency in modern feeding towards an acid ash-forming diet.

All our foods may be divided into two classes, those which leave, after digestion, an acid ash or residue, and those that leave an alkaline or "base" residue.

The mistake of modern feeding is that it inclines strongly to an acid-forming diet. Acidity is inimical to the best interests of life and health. It is well to know, therefore, that the foods which leave an acid ash are eggs, fish, meat, fowl, cereals and groundnuts. Where these are made use of, it is essential to provide liberally those foods which counteract this tendency to acidosis by their alkaline or base-forming elements. Such foods

are the legumes just mentioned, green vegetables usually served as salads, also cauliflower, beet, carrots, potatoes, turnips, asparagus, tomatoes, and all fruits both fresh and dried.

GREEN VEGETABLES.

Such green vegetables as are usually served raw and fresh are not high in nutritive values, but they possess a distinct value of their own which has been all too little recognized. It is now known that these fresh vegetables are an abundant source of the newly-discovered food elements, vitamins. For this reason some fresh uncooked food should be eaten at each meal, in the form of lettuce, raw cabbage, cucumbers, or other salads. They also supply potash, iron, calcium and other salts in important quantities.

Another particular virtue of vegetable foods, especially the stalk-vegetables, is that they prevent constipation by supplying the essential bulk or "roughage" in the form of cellulose.

DISINFECTING VEGETABLES.

Raw vegetables and fruits should be freely used by those living in tropical climates. Some abstain from their use from fear of contracting bowel infection. These may be safely guarded against by dipping or washing the vegetable or fruit in a solution of permanganate of potash or Condy's fluid and then rinsing with water that has been previously boiled and cooled.

Great care should be exercised to select sound fresh plants. Any vegetable showing signs of decay or which has already become soft through standing, should be rejected.

Potatoes.

The potato deserves special mention, as among vegetables it occupies a premier place. Of all vegetables this is the easiest to secure and keep on hand. It is readily digested when

properly prepared and ranks high in nutritive value, being especially rich in carbohydrates, in the alkaline base-forming salts, and in anti-scorbutic factors.

The potato is counted as a food low in protein element, but, according to the great Danish Scientist, Hinhede, it contains sufficient of this food element to meet man's needs under the strain of heavy labour. In his experiments conducted for the Danish Government and covering a period of years, he has kept groups of men on only potatoes and fats for many months at a time, while subjecting them to heavy manual labour. These tests and observations have proven that the potato will supply the place of a " key food " around which a substantial meal may be built by adding green vegetables or fruits, fats from butter or cream, the usual bread ration, and some additional protein food as legumes and eggs or milk.

The value of the potato cure in uric acid conditions is now well recognized. In this disease the patient is placed upon a diet of potatoes and butter, with some green vegetables. He is encouraged to consume large quantities of potatoes, as this diet has the power of dissolving uric acid and facilitates its elimination through the kidneys.

A well-prepared potato is mealy but not soggy ; it should be either baked or boiled. Frying or cooking in fat makes this vegetable most indigestible. Never serve potatoes in a closely covered dish, as they thus become sodden, but cover with a folded napkin, and allow the moisture to escape.

Tomatoes.

It is necessary to write a few lines in defence of the tomato, as this food has wrongly been accused of causing cancer. On the contrary, if more tomatoes and less meat were eaten, it is quite probable that there would be a considerable reduction in the cancer mortality.

Cancer is a disease found chiefly among people subsisting upon a high protein ration. The increasing prevalence of cancer has kept pace with the increasing consumption of flesh foods. Cancer is increasing among animals used for food and it is not to be wondered at that the disease should thus be transferred to man.

The tomato is rich in organic acids, basic substances and protective elements, and is, indeed, a wholesome food for hot climates.

GRAINS.

The different grains as wheat, oats, rice, maize have from the dawn of history been considered as the " staff of life." This is due to the fact that they provide so nearly all the elements required for man's needs in almost the correct proportion, with the exception of rice which is low in protein element.

Bread.

Whole wheat (*ata*) bread possesses properties which so nearly represent the constituent parts of the body as to make such bread ideal for building up and keeping in repair the human organism. This fact is recognized in the familiar Hindustani expression for taking of food *roti kha raha*. He is eating his bread.

Therefore taking *ata* flour either as loaf, *chapati*, or macaroni for the " key " food, the meal should be constructed by building around this wheat foundation other foods, keeping in mind the actual nutritional requirements.

First select a portion of one additional complementary protein article, either *dal*, beans, peas, nut preparation, cheese, milk or eggs. The addition of milk or cheese is desirable to supply certain requirements for tissue growth not so well provided by *dal*, beans or peas. The addition of a liberal supply of leafy green vegetables to the last mentioned vegetable proteins would more nearly substitute for milk or eggs by supplying the missing amino-acids. Butter, cream or oil supply the fat requirement. The remainder of the meal should be built up either of vegetables or fruit to supply bulk, inorganic salts and such vitamins as are not supplied by the other constituents of the meal. A meal thus constructed may be relied upon to supply every food requirement for body and mind.

Wheat is the best of all bread-making grains, as well as one of the most nourishing, because of the large amount of gluten which it contains. Gluten is an albuminous substance made up of a number of different kinds of albumin held together by a vegetable gelatin. It is the rubber-like tenacity of this gluten by which the bubbles of air or gas are confined in the dough, that makes wheat flour so superior for the making of light breads.

Gluten is one of the most valuable elements of the grain. It serves specially to build up brain, bones and muscle as well as blood. Gluten is found most abundantly in the outer layer of the kernel, the chief remaining constituent being starch. It is for this reason that flour should be made of the entire grain, preserving these important elements.

Fine-Flour Bread and Beriberi.

A warning should be sounded against the free use of highly bolted flours. According to medical experts, the evil effects of using fine, white-flour bread are very apparent wherever this article occupies an important place in the daily diet. Polyneuritis or beriberi, malnutrition, constipation, decay of the teeth, bone and nerve disease, may be the result of using flour from which the bran and outer coatings have been removed by modern milling process. This flour is deficient in important vitamins and tissue-building elements, also in bone and nerve food. This highly milled flour contains only one grain of organic lime to the pound, while the whole wheat contains four grains. The dangers from these deficiencies are easily avoided by using bread made of entire wheat flour.

Other Cereals.

Maize, oats, rye, and barley closely resemble wheat in their constituents. These cereals are best served as porridge or

scones, as they cannot be used for loaf bread-making in the same way as wheat, due to their deficiency in vegetable gelatin, although they are quite rich in other albuminous elements. The same principles apply in general to these grains as discussed under wheat breads.

Rice.

Rice has been called the "king of foods." It feeds more millions than any other food used by man. One-half of the world's population makes this the principal article of diet. It is one of the most nourishing and easily digested of foods. Rice is rich in carbohydrates, mineral salts and water soluble B Vitamins.

But as this cereal is somewhat low in protein content, it should be combined with such higher protein foods as *dal*, beans, peas, nuts, milk and eggs. This combination balances the carbohydrates and protein elements. If used with a free allowance of milk and green vegetable or fresh fruits, we have not only a highly nutritive diet, but one which is rich also in its protectve and healing properties.

Rice and Beriberi.

Beriberi is a deficiency disease of the nervous tissues, characterized by degeneration of certain nerves, resulting in gastro-intestinal, heart and circulatory disturbances.

One peculiar feature of this disease is that it is found to occur most frequently among rice-eating peoples, although it does occur, at times, among other communities.

The investigations of Funk and others suggest that this disease is probably due to the use of white, polished rice as a staple article of food. In the polishing of rice the subpericarpal covering layer is removed. This layer of inner coverings

contains a substance called by Funk "beriberi-preventing vitamin." This substance is a true nerve food and is essential to a well-nourished nervous system. Its absence from the diet produces a condition of nerve starvation, resulting in a breaking down of the nervous mechanism, and as a result, the signs and symptoms of beriberi begin to appear. The disease is cured by supplying the substances removed from the rice in polishing, and thus providing this essential nerve food.

These findings indicate that only brown or unpolished rice should be used. Rice should always be cooked in ordinary pots, and never under pressure by steam, as this latter method of superheating the rice destroys the beriberi-preventing element.

FRUITS.

The demonstrated value of using some raw food as part of the daily diet, has given new interest to fruit as an essential part of a sound dietary. Ripe fruits supply nutriment in a form most easily and readily absorbed, and their juices are converted into blood and energy quicker and with greater ease than any other form of food.

Fruits are low in protein element but rich in carbohydrates, organic base-forming acids, mineral salts, pectose, compound ethers, essential oils and vitamins. In addition to their nutritional value they are indispensable as natural laxatives and for other disease-preventing properties. No other class of foods contributes more favourably to the essential needs of nutrition. From the wide range provided, suitable selections may be made for all conditions of age, health and disease.

The nutriment contained in fresh seasonable fruits is to a certain extent predigested by the ripening process. In this process starch is converted into levulose, a form of sugar requiring but little digestion to transform it into vital energy. Grapes contain from fourteen to twenty per cent of this sugar, a well-ripened plantain contains about twenty per cent and dates fifty per cent.

The observations of Trielle show that the outward appearance of fruits offers a fairly reliable guide as to this amount of sugar contained. Fruits with a reddish brown and yellow skin usually contain much sugar, while red-skinned fruit contains only a medium amount of sugar. Thomason has emphasized the high nutritional value and fitness of fruit sugar as a principal source of energy, by calling attention to the fact that such sugar may be injected directly into the blood without first passing through the digestive process, and that fruit sugar thus injected

is utilized in nourishing the body without unpleasant results. This is in marked contrast with ordinary table or cane sugar, which, if injected directly into the blood, is expelled through the kidneys, the body being unable to appropriate it from the blood without previous digestion. This accounts for the interesting observation that ripe fruit when eaten will quickly relieve a sense of exhaustion.

Fruit Acids.

Three principal acids are contained in fruits, namely, citric, malic and tartaric. These acids have a high medicinal as well as dietetic value. A very important part they act in the metabolic process, is the neutralizing of the acid ash-forming tendency of certain other foods.

Contrary to general opinion, fruits do not increase or encourage an acid condition of the blood or tissues, but may be relied upon as a safeguard against over-acidity. This is due to the fact that fruit acids undergo certain chemical changes within the body producing alkaline products which in turn increase the alkalinity of the blood. It is only by a free use of fruits and vegetables that the correct acid and alkaline balance may be maintained. This alkalizing action of fruits and their juices makes them the best of all blood purifiers.

Fruit acids are recognized as effective peptogens, that is, if fruits are taken at the beginning of a meal they stimulate the appetite and promote the production of digestive fluids.

Fruit Salts.

Among the more important salts found in fruits are lime, iron, potash and phosphoric acid. These salts are most desirable for tissue-building and maintaining a normal health balance.

It has already been shown that lime and iron are indispensable to the normal operation of bodily functions.

Anæmia, so prevalent in India, is due to conditions and habits which tend to deplete the blood of its normal iron content,—about 45 grains in the blood of an average individual. One loses each day nearly a quarter grain of iron. Should this minute yet important quantity not be replaced by a daily intake of iron-containing food stuffs, it is easy to see that in three months' time half the iron in the blood would be lost, which is almost equivalent to losing half one's blood, so important is iron to the blood and its functions. It is well to know, therefore, that fruits are a rich source of iron, perfectly adapted to the body needs in a way that cannot nearly so well be supplied by medicinal or metallic iron. Anæmic persons should be encouraged to partake freely of fruits and green leaves of vegetables.

Fruits possess still another medicinal and prophylactic value of which mention must be made. Auto-intoxication or self-poisoning resulting from absorption of toxins, produced by fermentation and putrefaction in a sluggishly acting bowel, has long been recognized as the chief cause for most chronic diseases. It is now becoming quite well known that in fruits we have a very desirable intestinal disinfectant. It has often been demonstrated that disease germs will not survive in fruit juices. This disinfecting power of fruit juice is due to the acids they contain. These fruit acids are readily acceptable to the body tissues, being normal food constituents. Fresh grape juice may be used with great success in the treatment of enteric fever. Thomason recommends the following in the fetid summer diarrhœas of children : "Add the juice of one lemon to three pints of water, use this for flushing the bowel after a cleansing enema has been given." He adds, "Flushing the bowel frequently with such a solution will destroy disease-producing bacteria in the colon."

For the purpose of disinfecting the stomach and alimentary canal in general, an exclusive fruit dietary for three or four days is sometimes advantageous. One exclusive fruit meal a day is another plan to be recommended. With some persons tart or acid fruits produce gastric distress; these persons can usually find immunity from unpleasant results by confining themselves to well-ripened, non-acid or bland fruits, such as pears, prunes, dates and plantains.

In the large variety of appetizing fruits, nature has well provided for our daily need of raw food. Some form of raw fruit should constitute a regular part of the daily ration. "Eat more fruit and less protein foods" is sound counsel for the average person living in a tropical climate.

NUTS.

Nuts have been used mostly as a dessert by Western people, usually taken after a full meal of other highly protein foods. When thus used they often cause digestive disturbance, thus giving them an undeserved reputation as being difficult of digestion. Their real merit as a substantial source of sustaining food has been appreciated by but few except among Asiatic and Eastern peoples.

Nuts in their various forms and preparations present the most concentrated nutriment of all food substances. They are rich in protein, and also contain carbohydrate, fats and mineral salts. So rich are they in protein or albumin content, that one pound of nuts equals two pounds of beefsteak.

The discovery that nuts (like meat, milk and eggs) contain the full quota of amino acids, making them a rich source of complete proteins has elevated these foods to first place among rational substitutes for animal food.

Inasmuch as nuts themselves consist of concentrated nutriment, it is folly to eat them after a full meal, thus overloading not only the digestive tract, but the blood current as well, with an excess of highly nitrogenous material to the detriment of the organism as a whole. These foods require thorough mastication; they should be liquefied by mouth treatment before swallowing. In this state their substance is readily acted upon by the digestive fluids.

The peanut (China *badam*), the almond (Kabuli *badam*), and the English walnut are particularly desirable sources of complete protein when meat is to be discarded from the diet. Four to five ounces of nuts, if this is to be the exclusive source, afford an abundance of protein for a day's ration; but half that quantity will suffice to supplement the proteins of an ordinary varied non-flesh diet. If nuts are not used in the daily non-meat diet, then two eggs, or a pint and a half of milk should be added to the regular vegetable, fruit and bread ration. Either of these will insure the required amount of complete proteins.

Nuts in combination with fruits constitute a perfect diet. In California, U. S. A., there are whole colonies of people who live exclusively upon this diet, and have done so for years. They maintain a far higher standard of health than the average. Their children too,—some of them have never tasted any other kind of food—are perfect specimens of health.

The unaided effort of nature has produced richer foods in the trees than man by thousands of years of cultivation and selection has been able to produce in the grain fields.

It should be mentioned that the chestnut is an exception in that it is very low in protein and high in carbohydrate content. This nut is not suitable for raw use but requires

preliminary preparation by heat. The peanut (China *badam*) while rich in protein also requires preliminary preparation to make it suitable for eating. This may be done either by boiling, baking or roasting, much the same as in preparing of pulses.

I would recommend to my readers that they become acquainted with some of the splendid nut preparations which may be purchased, sealed in tins and glass bottles, ready for use, in the same manner as meat would enter into the preparation of various dishes.

MILK AND EGGS.

Among all peoples milk is recognized as a natural food. It is, in fact, one of the choicest and most wonderful foodstuffs prepared in the great laboratory of nature, good not only for the growing mammal, but also a valuable addition to the adult diet. However, it has remained for investigators of recent years to discover the unique value of milk in its exact adaptability to our biologic needs.

In total nutrition, a seer of pure, whole milk is equal to a pound of beefsteak or eight eggs. As a source of muscle-forming material one seer is equal in portein value to either of the following : seven ounces of sirloin steak, or six ounces of round steak, or 4·3 eggs, or 8·6 ounces of fowl. It contains in splendid proportion the ordinary nutritive principles of sugar, fat, albumen and salts. In addition to these there is found a growth-regulating substance or vitamin, so essential to the normal development of the young. Perhaps no other food except green vegetables is so rich in this vitamin. It must be remembered that growth-vitamin is found only in milk of cows fed on green grass. Therefore it is desirable that the milk supplied to your children should be derived from cows fed upon greens.

This growth-element is the property of whole milk, not skimmed. When cream or the fat of milk is separated for making butter, this growth-element is removed with the cream, thus impoverishing the milk of this very essential element for the growing child. If for any reason it is necessary to deprive the child of milk for a time, the next best source for growth-regulating vitamins is from green vegetables, or yolk of eggs, or butter.

Milk protein is of the complete variety, and contains all of the amino acids or " building blocks " required for a complete tissue food. Therefore it is in itself a desirable source for the

required protein ration. Also it provides a valuable supplement to use with such incomplete foods as cereals and pulses to make up just what these foods lack in the protein element. Even skimmed milk from which the fat has been removed, is still a very desirable food for its protein content. The shortage of fat can be made up from other sources.

Authorities on dietetics differ somewhat as to the quantity of milk required daily by the growing child. Some hold that three-quarters of a seer suffices, while others maintain that one seer is none too much. But one thing stands out clearly, that, for the growing child, it is the building up food par excellence. Give him plenty of whole milk, but be certain the milk is clean and pure. There is scarcely anything so bad as *bad* milk.

The handling of milk in India is so unsanitary that the only way of protecting against disease infection, is to bring all milk to a boil before using the same. When set aside to cool it should be carefully protected against dust and flies, as these are sources of re-contamination even after it has been boiled.

It is claimed by some authorities that boiled milk lacks in certain anti-scorbutic vitamins which are destroyed by the high temperature in boiling, although it is still rich in growth-vitamins, as the latter are not so much affected by heat. Babies fed only on boiled milk are apt to develop a form of scurvy unless fresh orange juice is frequently given.

When in search of a "curative" diet for invalids, milk is more often resorted to than any other food. This is due to the ease with which it is assimilated, and to the fact that it is more completely used, leaving less disturbing waste within the body than any other available food. Also for simplicity of diet one can more safely resort to some form of milk, milk preparation, or sour milk (*dahi*) than most other foods.

The adult subsisting upon the usual mixed diet of bread, pulse, vegetable and fruit should add not less than one-fourth seer of milk daily to insure a well-balanced and ample diet.

Dry powdered milk answers very well when the fresh article is not procurable. Care should be taken to select a variety made of whole, not skimmed milk. These powder milks seem to retain their vitamins and have been largely used for baby feeding milk in Europe with good success. Such milk is superior to condensed for infant food.

Professor McCollum makes the observation that milk and not meat is the element which is responsible for the apparent superiority of the people of meat-eating countries. In cattle-raising countries, dairy industries flourish, milk is freely used, and generally to a much larger extent than meat. The testimony of science is positive that a lacto-vegetarian diet is the most favourable for developing a long-lived and hardy race.

Eggs.

Eggs belong to the nitrogenous foods, as in them the protein element predominates. The white of egg is nearly all albumen. The yolk being a natural food is the most important and useful part of the egg. It contains in addition to protein considerable fat and mineral salts, especially iron, phosphorus and lime. These mineral salts being of organic form are more easily absorbed and utilized by nature than the inorganic preparations. The yolk is also an important source of growth-vitamins.

Fresh eggs are entirely free from animal poisons, yet if freely used are apt to encourage intestinal auto-intoxication. For this reason they would be well discarded by persons having intestinal stasis (constipation) who are desirous of escaping the disagreeable features of chronic intestinal toxemia.

WATER DRINKING.

Water is usually not classed with foodstuffs. However, it is one of the most important of all nutritional requirements. This will be recognized from the fact that five-sixths of the body's weight and bulk consists of water. Other elements entering into the composition of the human organism are measured in grains, drachms, and pounds; all of which are combined with several pails of water, making up the total bulk of a living, functioning, healthy man or woman.

The principal essential element for supporting the normal and manifold bodily activities is water. The blood, lymph, digestive and other fluids are composed chiefly of this liquid. All vital processes are dependent upon an ample supply thereof. The body tissues must operate under water, just as fish can survive only in water.

To maintain the balance of normal health requires that all tissues be bathed in a constantly renewed stream of fresh water passing through the body organism in much the same manner as water passes along the channel of a river. It is thus that the tissues are kept washed free of accumulating toxins, and that their vitality is maintained.

The average adult living in a hot climate should consume about eight glasses of water during the day, preferably between meals. The use of liquid foods such as soups, fruit juices, milk and watery vegetables, helps to make up this liquid need.

Certain precautions are to be observed. Do not drink too much at one time, nor should the water be very hot or cold. Copious drinking at meal time needs to be guarded against, as it encourages the washing down of foods before they are properly masticated or insalivated by thorough mouth treatment. One glass of water is quite sufficient to sip from during the meal.

Insufficient water-drinking must result in stagnation of the human sewage system with resultant auto-intoxication.

THE FIGHT AGAINST OVERWEIGHT.

Overweight is not only an inconvenience but also a decided handicap. Authorities tell us that persons whose abdominal measurements exceeds that of the chest are regarded by insurance companies as poor risks.

There are various contributing causes for obesity. Amongst these are sedentary habits, deficient exercise, heredity, lessened thyroid activity, and, in women, frequent childbirth. While these are important contributing causes, there is really only one source of excess fat; it must come from the food one eats. What one eats and how, is the deciding factor as to the figure at which one tips the scale.

The inclination to corpulence of so many who pass middle age, reveals the tendency at this period of life, to over-eat and under-exercise. With passing years the bodily changes of metabolism operate much more slowly, and on this account less food is required to supply the demands for tissue repair and to maintain normal weight. If under these circumstances the food allowance of former years is still maintained, and the digestive functions are in fairly good condition, the result must inevitably be a gradual and progressive increase of weight.

Excess fat, in addition to being unsightly, is also harmful in direct ratio as it exceeds the normal. Each pound of extra weight places the heart under additional tax. This excess of fat bulges not only outward, but also inward, putting pressure and strain upon the internal organs and structures. This strain, in effect, is much the same as an individual being compelled to carry about, night and day, an excess weight strapped to his person.

The exchange of fat cells for muscle tissue in the heart and other structures is known as fatty degeneration and is accompanied by lessened efficiency of function.

The remedy for this condition comes under two heads; reducing the quantity intake of fat-forming foods and increasing daily exercise.

Remembering that overweight represents an excess of food units or calories consumed in the form of food or beverage; the essential remedy becomes self-evident. First of all, make an exact quantitative estimate of food taken during the day. For scientific accuracy this may be worked out in calories, as per table of caloric values. Then reduce the food allowance by half, sugar and fats and sweets being rigidly limited. Weigh yourself regularly and regulate the quantity of foods accordingly. Drink five to six glasses of water daily. To satisfy the empty feeling resulting from the former habit of taking into the stomach large quantities of food of high caloric value, partake instead freely of bulky but low caloric value foods, as spinach, salad made of greens, lettuce, cabbage, string beans, cauliflower, cucumbers, onions, celery, turnips, pumpkin, and rhubarb. Fresh or stewed fruits also may be taken freely, with the exception of plantains, figs, dates, raisins and olives, which are of high caloric value. All breads, porridge and cereal preparations must be carefully limited for the same reason, as also pulses, meats and dairy products.

Exercise daily to equal a five or six-mile walk, in whatever way is preferred. On such a régime it is possible to reduce weight with safety to any desired degree.

UNDERWEIGHT.

Underweight is the result of malnutrition, which in turn is due to dietetic errors or chronic disease of the digestive organs. Often both causes operating in the same individual. The problem here is to secure the largest possible number of food calories in an easily digestible form and to correct faulty dietetic practices. The daily caloric intake for such persons may often be increased to 3,500 with profit.

Keeping in mind the necessity of green vegetables, fruits and raw foods for their regulating substances, the diet of the underweight individual should be largely reinforced by such foods as milk, cream, egg yolk, butter, edible oils and sugar of milk. Ordinary sugar is a good fuel food, but should be taken well diluted; if used in a concentrated form it tends to produce gastritis. Sweets are best taken at the end of a meal and never between meals.

Do not worry over your underweight but remember that "a lean horse for a long race" also applies to man in the race of life. Mortality statistics show that in elderly life, underweight up to fifty pounds below the average, conduces to longevity.

CONSTIPATION.

The result of modern research shows that most maladies from which man suffers are due to sluggish, retarded action of the alimentary canal. A slow-acting bowel is always laden with delayed food residue, which instead of being evacuated normally after sixteen to eighteen hours from the time food has been taken, does not reach the final gateway of the bowel until after one, two, four, six or more days of delay, as revealed by X-ray examination. Notwithstanding this intestinal stasis (constipation) the individual may be having a daily bowel evacuation, most probably under influence of bed-time pills or morning salts.

Such a condition is usually accompanied by infection of the alimentary canal with poison-forming germs. These germs produce putrefaction and fermentation of the stagnant food-residue in the bowel, giving rise to a great variety of distressing maladies and symptoms. So many and serious are the disorders now traceable to this state of food stagnation, that some eminent surgeons have advocated and are practising removal of the large bowel. However, we cannot believe that nature is at fault in giving man a non-essential or harmful organ, but rather that the fault lies with man in practising unnatural and injurious dietetic and other habits of life. All such harmful practices must first be corrected and nature will right the sluggish intestinal action.

Putrid foul-smelling stools are an indication of intestinal infection. The bowels should move thoroughly preferably three times a day, the most natural time being soon after food has been taken, as then intestinal peristalsis is most active. It is important to train the bowel into such habits by trying to bring about an evacuation upon arising in the morning and after each meal. This training must be persisted in until normal habits are re-established.

In addition to the above corrective habit-forming practice, make free use of fruits and vegetables with meals, particularly such as are suitable for eating in the raw state. Another practice, which has proven very helpful in overcoming constipation, is the use of cooked bran (*choker*), one or two tablespoonsful, together with other food at meal time. The usual diet of meat, potatoes and white bread, with tea and coffee is certain to produce constipation.

Pills and laxative drugs do not cure the cause of this inactivity, they only make it more chronic. Persons who are decidedly irregular should adopt a liberal fruit and bulky vegetable diet, using only bread made of whole meal flour, and brown rice instead of the white, highly polished article, and drinking not less than six glasses of water. Neglect other things if necessary, but do not neglect the regular practice of bowel evacuation.

If further aid is required, it is possible to produce easy passage of soft large stools by the use of Agar-Agar, a sea weed obtainable from any chemist shop. Agar-Agar is not a food or medicine, and is not acted upon by the digestive fluids. Its value lies in that it absorbs and holds a considerable quantity of water, thus adding bulk and moisture to the bowel contents. Refined mineral oil, prepared from paraffin may also be used with safety as a useful lubricant. If the individual is thin and underweight, he may make free use of edible table oil as almond or olive oil.

HOW TO EAT.

Health is very largely the result of conforming to natural laws; therefore, to understand the few fundamentals of nutrition is equal to possessing a health assurance policy. The first rule of diet may be stated thus: Eat to live, not live to eat. Man is as he eats. There is in India to-day an army of people who have eaten themselves into physical degeneracy and mental inefficiency. Experience has shown that it is possible by corrective feeding literally to eat oneself back into physical and mental fitness again.

Appetite is nature's call to us to take food. It is directed by the wonderful intelligence presiding over the various organic functions. The clock on the mantel-piece is no safe guide. According to the clock it may be tiffin time, but the lack of appetite indicates that the food taken at breakfast has not sufficiently advanced in the chemical process of digestion to warrant the introduction of more food at that stage. Better would it be to miss a meal and wait for nature's call of appetite. Not only does appetite indicate preparedness to care for additional food, but it also is the essential exciter of the nerves governing stomach digestion. The proverbial "mouth watering for food" indicates that the secretory glands in the stomach and intestines are in readiness to secrete their respective digestive fluids. Waiting for appetite, and exercising sufficiently to produce hunger, insures good digestion.

Do not eat when tired, as digestion will be very sluggish and imperfectly performed. It would be better to rest first or take a short nap before eating.

If in a hurry and you find it necessary to curtail the usual time allowed for meal, do not eat faster than usual, but eat less. Hurry and worry have an inhibitory influence over digestion. Cannon has shown by means of the X-ray that worry

may cause an entire cessation of digestive activity for several hours. The meal hour in particular should be free from care, worry, or business, rather let it be a time of mirth and good cheer. Such a mental attitude promotes digestion and well being. "A merry heart doeth good like a medicine."

Mastication.

Preliminary to the series of events comprising digestive activities is the mechanical process of mastication. This, as also the selection of food, is a voluntary matter, and therefore under individual control. Mastication or mouth treatment of food is no less important than the less voluntary chemical and mechanical events taking place in the stomach and intestines. At the back of the mouth are located the specialized nerves of taste. These "taste bulbs" are stimulated by the natural flavouring matter contained in all foodstuffs. Nature has so arranged that the kind and quantity of flavouring substances contained in the foods we eat serves to stimulate the taste nerves in the mouth, and through them messages are sent to the brain centers presiding over the chemical process of digestion. The brain centers in turn send impulses to the secreting glands located in the wall of digestive organs. These secreting glands are guided as to the kind, composition and quantity of digestive fluid required for the meal soon to follow, by the messages originating in the taste bulbs of the mouth.

It is now a well-established fact that each different kind of food requires a different composition of digestive fluid for its perfect digestion. The flavouring substance contained in any particular food is the determining factor upon which the directing function largely depends for guidance. The discovery of this interesting relationship existing between food flavours and perfect digestive results has given new dignity to the ordinary process of mastication.

Since each class of food requires a digestive fluid adapted to itself, it becomes apparent that this fluid cannot be at the same time in the highest degree adapted to the digestion of a large variety of foods at one meal. Hence the advantage of simplicity in the selection of a meal.

Each mouthful of food should be masticated or chewed so long as it tastes good and not swallowed until this action is performed involuntarily. If thus treated it provides for contact of flavouring substances with taste nerves sufficiently long to ensure an adequate and well-adapted digestive fluid suited to the food ingested.

Thorough mastication also provides for complete insalivation and liquefying of the food. This free mixture of saliva is necessary for the digestion of the starchy element contained in our foods. During the first half hour after food has been ingested the alkaline saliva continues its chemical activity within the stomach of converting the starches into a form of sugar. After half an hour the acid gastric juice becomes sufficient in quantity to neutralize and stop this salivary activity. The starches will by this time have been sufficiently acted upon, provided there has been an adequate quantity of saliva mixed with the food.

In addition to the above effects of mastication the thorough crushing and breaking up of the food guards against injury and irritation to the delicate lining of the stomach caused by coarse particles of food being swallowed. The failure to do this is frequently the cause of gastritis. This crushing also insures the digestive fluids acting upon all the food particles effectively and has been proven to be a great measure of economy, in that most of the food eaten will thus be converted into energy and tissue-forming substances.

FEEDING THE NEW-BORN INFANT.

The following paragraphs on infant feeding are taken from a paper read before the Colorado State Medical Society, by F. P. Gengenbach, M.D., and published in "Colorado Medicine." They are reproduced here because of the excellent instruction contained therein :—

"We all realize the importance of a good beginning. Sociologically the new-born infant is entitled to the best possible beginning in life so that it may become the best possible citizen in later life.

"While much is heard of the influence of mind over matter, we physicians appreciate the influence of a healthy body over mind and morals. What is more essential to the development of a healthy body than proper nourishment ?

"We all know that human milk is the proper nourishment for the new-born infant, yet we are continually ridiculing Dame Nature and tempting Fate by unnecessarily taking the infant from the breast.

"One of the principal reasons for this paper is to refute the statement so often expressed not only by laymen but many physicians as well, that a large proportion of mothers cannot nurse their babies.

"We are greatly indebted to Dr. J. P. Sedgwick for his investigations into the breast-nursing problem in Minneapolis. He has definitely shown us that over ninety per cent of the mothers were able to nurse their babies, either wholly or to a sufficient extent to make the breast milk an essential part of the infant's nourishment.

"He has also shown us that successful breast nursing is dependent upon regular complete emptying of the breasts, and that with the aid of manual expression of the milk after the infant has nursed, the secretion of the breast may be increased and in some cases rehabilitated even after the mother has ceased nursing her infant for several weeks.

"These are facts which we have verified to our satisfaction and that of many mothers. Frequently it has required much tact upon the part of the physician, and even more patience and persistence upon the part of the mother, but the results usually have justified the use of all these virtues.

"It has been my practice to have the mother nurse the infant every four hours for ten minutes at each breast, after which any milk remaining in the breasts is manually expressed and given to the infant with a spoon or in a bottle.

"At first the mother usually obtains only a few drops, then a teaspoonful or two, and later as much as an ounce or more. Not only does this small extra amount of milk after each nursing frequently spell the difference between the baby's gaining and not gaining, but the thorough emptying of the breasts seems to stimulate an increased secretion of milk.

"Unless the supply of breast milk is markedly inadequate, this plan of feeding should be tried for several weeks before condemning it and resorting to artificial feeding. Where the supply of breast milk is inadequate and cannot be increased sufficiently, the infant should be given complementary and not supplementary feedings as the latter entail a decreased number of nursings with their stimulation of the secretion of the breasts.

"If a complementary feeding is necessary after every nursing a modification of whole or skimmed cow's milk is prepared for the day, but if only given occasionally a dry milk formula freshly prepared each time is usually used because of its convenience.

"When no breast milk is obtainable the physician has no choice but to use some substitute food, usually a modification of cow's milk. I hold no brief for any proprietary infant food, neither do I condemn them all, for at times they may be useful, but is it not a serious reflection upon the profession at large, and also upon many hospitals that so many laymen have gained the impression that when a bottle feeding is necessary a brand of

tinned milk is practically always used? Furthermore, when the baby who is getting this milk is taken some months later to the pediatrician and he finds evidence of rickets and a lowered resistance to disease because of the continued use of this food, who is to blame for the condition—the parents who were deluded by the possible continued gain in weight of the baby, or the physicians who first prescribed it?

"But what shall we give the new-born infant if breast milk is not available or is insufficient? Many of them will tolerate a weak whole milk modification, especially those receiving some breast milk, but since it is usually the fat in cow's milk which disagrees with the infant, it is sometimes safer to start with a skimmed milk modification. In either case the milk is boiled because physiologically it agrees better with the infant than the raw milk.

"Where the infant is getting no breast milk start with 1 ounce of skimmed milk, 2½ ounces of water, and about ½ ounce of milk sugar per pound per day. Thus for a 5, 7, 9-pound infant we would respectively use, 5, 7, 9 ounces of skimmed milk, 12½—17½ or 22½ ounces of water, and ⅝, ⅞, or 1⅛ ounces of milk sugar. Boil for three to five minutes in a single boiler, or eight to ten minutes in a double boiler, preferably the latter. Divide into seven bottles and give a feeding every three hours during the day and four hours at night.

"It is a safe rule never to urge an infant to take more of a feeding than it wants, and always tell the mother not to give the unused portion of the feeding later, but to throw it away.

"Where the infant is getting some breast milk only a third or a half of the formula should be prepared. If there is an excessive amount of colic, decrease the milk sugar somewhat. If there is a persistence of curds in the stools, use barley or some other cereal water instead of plain water as a diluent, and decrease the sugar in proportion to the amount of barley flour used. Cook

the barley water first, then add the milk and boil again as previously directed.

"Each day replace 1 ounce of skimmed milk by 1 ounce of whole milk until only whole milk is being used ; then increase the whole milk and decrease the water each one ounce a day, until the infant is getting at least 1½ ounces, but practically never more than 2 ounces of whole milk per pound per day. This amount of whole milk will take care of the protein and fat requirements of the infant. As the milk is increased the sugar is gradually decreased, the amount of sugar added and present in the milk together being kept at about six per cent of the total mixture, or between ½ and 1/5 ounces per pound per day. The trained infant feeder recognizes the various forms of food intolerance and regulates the amount of fat protein and carbohydrate, also the kinds of carbohydrate used accordingly

"When the milk modification has reached the required strength the infant is usually put upon a four-hour schedule, receiving 2 ounces more at each feeding than it is months old, but usually not over 8 ounces at a feeding, nor over 32 ounces of whole milk in the twenty-four hour mixture."

Average weight of the healthy male child during the first year of life.

	lbs.
Weight at birth	6·8
,, ,, one month	7·4
,, ,, two months	8·4
,, ,, three ,, ...	9·6
,, ,, four ,, ...	10·8
,, ,, five ,, ...	11·8
,, ,, six ,, ...	12·4
,, ,, seven ,, ...	13·4
,, ,, eight ,, ...	14·4
,, ,, nine ,, ...	15·8
,, ,, ten ,, ...	16·8
,, ,, eleven ,, ...	17·8
,, ,, twelve ,, ...	18·5

A slight loss of weight commonly occurs during the first few days after birth.

THE DIGESTIVE CANAL.

The digestive system consists of a collection of organs used to change the food by chemical action so as to render it capable of being absorbed into the blood stream, and to eliminate from the body such remnants of foodstuffs as are not useful for nourishment. This canal is about thirty feet in length, extending from mouth to rectum, and for the greater part of its length is a little over an inch in diameter. The stomach and colon sections are of larger diameter providing for longer retention of food while undergoing special treatment. The walls of this canal consist of several layers of muscle tissue, and are lined for the full length of their inner surface with a delicate tissue known as mucous membrane. Examining this membrane through a microscope one observes many thousands of minute little openings, which lead to glandular structures within the membrane itself, where there is elaborated certain wonderful chemical substances, which are poured out through these openings into the lumen of the canal, thus mixing with the foods and producing the chemical changes called digestion. The chemical fluid secreted by these glands differs decidedly in the different sections of the canal. In the mouth there is secreted the alkaline saliva which, acting on the starchy elements of food during mastication, converts them into a form of malt sugar.

After food has been masticated, by the act of swallowing it is passed down a short section of the canal, nine inches in length, known as the œsophagus, connecting the mouth with the stomach.

The Stomach.

The stomach is an enlargement of the alimentary canal capable of holding about two quarts (two seers) of solid food or liquids. Under normal conditions the foodstuffs are detained in this organ from one to five hours, the time depending upon the nature of the foods partaken of. During this delay they

are subjected to treatment preparing them for the more complicated digestive process further along. The muscle walls of the stomach, by a series of rhythmic contractions, keep the food content in constant motion for the purpose of thoroughly mixing it with the acid "gastric juice" which is being secreted and poured out into the stomach cavity from the tiny glandular structures in the lining membrane. After the food has been thoroughly saturated with gastric juice and more or less dissolved, it is then allowed to pass through the pylorus, a muscular gateway between the stomach and the small intestine.

The Small Intestine.

The small intestine consists of a very extensively coiled tube about twenty-five feet in length and somewhat over one inch in diameter. The tube is constructed of two layers of involuntary muscles, the lumen (cavity) of which is coated with the same delicate mucous membrane in which are found thousands of secreting glands, pouring forth "intestinal juice," the most important of the various digestive fluids. In addition to the intestinal juice there is also poured into the small intestine, at a point near its beginning, "bile" from the liver and "pancreatic juice" from the pancreas. These three juices, being thoroughly mixed by the muscular action of the intestinal walls, with the now liquid foodstuff, produce the main chemical changes of digestion. From the small intestine the liquid nutriment of the meal is absorbed into the blood stream through a wonderfully constructed suction system, consisting of millions of minute tube-like processes, no thicker than a hair and one-sixteenth of an inch in length, projecting into the lumen of the intestine from the mucous lining. Not until food has passed through this complicated process of digestion and is sucked up into the blood stream, is it ready to become bone of our bone and blood of our blood.

The Large Intestine.

The small intestine terminates in a muscular valve and merges into the large intestine, which is some six feet in length, and is divided into the ascending, transverse and descending colons. Absorption still continues to take place in the first half of the colon ; but by the time the residue of food substance reaches the middle of the large bowel, it has lost all its food value and is ready to be eliminated as waste matter. If elimination does not take place promptly we have the condition known as constipation, which may become a serious menace to health.

Vermiform Appendix.

The appendix is a small blind tube projecting from the large intestine near its junction with the small intestine. The appendix is from one to six inches in length and about as large round as a lead pencil. Its cavity is very small (about the diameter of a pin head) so that it may easily become clogged with material from the colon. If this clogging fails to be relieved through the contractions of its muscular walls, there soon follows a rapid increase of bacteria with inflammation, which may result in the formation of pus. This condition is known as supurative appendicitis and calls for early surgical treatment in order to prevent the abscess from rupturing into the abdominal cavity, a condition almost certain to prove fatal.

DIET AND RELIGION.

It is significant that each of the great religious movements recognize the importance of simplicity and temperance in diet as an essential aid to spiritual attainments. The following translated quotation from the "Gita" is based on the Sankhya System of Philosophy, which enumerates three qualities that are not mere accidental property, but essential modifications of nature attributed largely to varying dietetic practices :—

"Those who have the inherent quality of "goodness" (Sattvik) delight in....foodstuffs which increase life, energy, vitality, happiness and sense of taste, which are pleasant and lasting in effect."

"Those who are naturally given to "passion" (rajasika) hanker after foodstuffs which are rather astringent, rather acid, salty, heating, biting, dry, irritating and exciting and which bring their train sorrow, affliction and disease."

"Those who have the inherent mental "darkness" in them (Tamasika) find pleasure in tasting impure foodstuffs which have been cooked long ago and flavourless, corrupt and stale." *Gita, Chapter XVII, Verses* 8—10.

Eating has much to do with religion. The spiritual experience is greatly affected by the way the stomach is treated. If this organ is abused, disturbances are created which affect the entire organism. The presence of fermenting, decomposing and often putrid food material in the stomach and intestines is reflected in a sour and morose disposition. Spiritual perception and spiritual living is as difficult under such circumstances, as it is for a man with tender corns wearing tight fitting shoes to smile and look pleasantly comfortable.

Spirituality comes only by impartation from above. It is not a natural part of our individuality, requiring only to be developed, as muscular tone or brain power may be increased.

Nor does it come as a result of eating, drinking or any other form of bodily exercise, but is the direct gift of God, to pauper and prince alike. The essential preliminary is a willing heart, a real desire to live the larger life in which truth, justice, righteousness and love are the qualities of strength. However, it will be apparent that these qualities are expressed or become manifest through operation of the mind. Physical force is expressed in muscle energy and requires a sound healthy musculature (muscle arrangement) for its full expression ; so spiritual force requires a sound healthy mind as its channel for expression.

Mind is the product of the mind-making organ, the brain, as bile is the product of the bile organ. The basis of all organic structure and function is food. The kind of food we eat, how and when we eat it—all has a determining influence upon our physical, mental and moral being. A certain writer has well said, " Tell me what you eat and I will tell you what you think." Man is so literally made of what he eats, that to be correctly fed is half the battle of life, and this is the half which is under man's control, the other half belongs to God and constitutes the providential side of life.

The writer believes that in carrying out the principles of biological living one is providing most effectually for a sound healthy body and mind as a channel for fuller expression of spiritual force.

The Christian concept of the relation between dietetic habits and spiritual living may be set forth briefly by several quotations from the Bible :

" Know you not that you are the temple of God, and that the spirit of God dwelleth in you."

" Having therefore these promises, beloved friends, let us purify ourselves from all defilement of body and spirit, securing perfect holiness through the fear of God."

This teaches that each human body is intended to be a living temple for the incarnation of God's Spirit, and that man's highest purpose is to be realized only in a spirit-filled life. The importance of clean living for the realization of this spiritual possibility is expressed thus :

" Whether, then, you are eating or drinking, or whatever you are doing, let everything be done to the glory of God."

" If any man defile the temple of God, him shall God destroy ; for the temple of God is holy, which temple you are."

The defiling here mentioned is not of the ceremonial kind consisting in the violation of certain caste or ecclesiastical regulations ; but it refers to practices contrary to our good, and which are a violation of those laws of God which are written on every tissue and fibre of our being, even to such practices as leave disease and enfeeblement as their consequences.

The destruction threatened includes the physiological penalty for wrong doing. Over-eating and too frequent eating, clog and foul the human machinery, making it sensual and lethargic. Such people do not live to a ripe old age.

The free use of irritating and hot spices produce an irritable disposition, easily provoked, also gastric, nervous, and mental disorders. This physical and mental state is not conducive to development of the finer spiritual graces.

Alcohol and tobacco depress the higher centres of life so essential to spiritual living. They leave unbridled the lower centres of life which emphasize the animal nature in man. Sexual sin leaves its ineradicable defilement from which almost half the race is rotting at the core.

The law of cause and effect unerringly operates in man's life and practices ; it is expressed thus in Holy Writ, "Whatsoever a man soweth, that shall he also reap."

Part II.—HEALTHFUL DIET FOR INDIA.

150 CHOICE RECIPES.

PREPARED BY MRS. H. C. MENKEL.

SOUPS.

The seasoning of soups is an important part in their making, specially is this true in the preparation of plain soup without milk or cream. Such different seasonings as onion, celery, sage, *methi*, *soya*, parsley, bay-leaf, lemon rind, Marmite, etc., when combined with the soup stocks, produce delicious flavours. For instance, a plain *dal* soup, all plain potato soup can readily be changed to quite a different flavour by adding one or more of the above seasonings and when milk, cream or tomato is added, it not only changes and enriches the flavour, but also adds to its food value.

Soups may be served with toasted bread sticks or cubes. Soups that are made from fresh vegetables, cooked with their skins on, together with leaves of vegetables. as celery, parsley, lettuce, cabbage, are rich in vitamins and mineral salts, and yield most delicious and appetizing flavours. Strain such soups and serve plain or with milk or cream.

Marmite is a vegetable extract, excellent in flavouring soups and sauces. It is delicious as a hot drink or as a filling in sandwiches.

To have fresh leaves for seasoning, such as parsley, *methi*, *soya*, sage, mint and even celery, plant a kitchen garden in boxes or in plant pots if you do not have the garden space. This gives you the pleasure of having fresh leaves for salads as well as soups.

Vegetable Soup No. 1.

- 2 Cups diced potatoes (not peeled).
- 2 Cups diced carrots (not scraped).
- 1 Cup green peas.
- 1 Cup chopped cabbage.
- 2 Onions.
- 1 Cup chopped celery leaves.
- 1 Cup chopped lettuce.
- 1 Tablespoon chopped parsley.
- 1 Tablespoon oatmeal.
- 6 Tomatoes (medium size).

Scrub potatoes and carrots with a brush and wash all vegetables in plenty of cold water. Put all on to cook in cold water sufficient to cover all vegetables well. Cook slowly for two hours, adding more water when necessary; add the tomatoes when the vegetables are tender. When the soup is cooked there should be one quart or four large cups of rich thick broth. Salt to taste and serve with bits of the vegetables, or strain and serve with rice or as a clear vegetable soup. One cup of rich, fresh milk or half milk and half cream added to the broth makes a most wholesome and the principal dish for lunch. It is rich in vitamins and vegetable salts. Serve with *ata* cream rolls.

Vegetable Soup No. 2.

- 2 Cups potatoes (diced).
- 2 Cups carrots (diced).
- 2 Cups green peas.
- 6 Fresh tomatoes (medium size).
- 1 Cup celery with leaves, chopped.
- 2 Large red onions.

A few *soya*, *methi* and fresh sage leaves, if you have them.

Wash all vegetables well. Do not peel potatoes or carrots. Pour boiling water over the tomatoes and slip off the skins. Put all vegetables on to cook in sufficient cold water to cover well, adding the tomatoes when vegetables are tender. Cook for two

hours adding more water if necessary. Serve with bits of vegetables or strain and add one teaspoonful Marmite. Salt to taste. Serve hot.

Dal Soup.

1 Cup *dal* puree.
2 Cups tomato, strained.
1 Cup water.
1 Tablespoon chopped onion.
1 Tablespoon flour.
1 Tablespoon butter.

The *dal* should be well cooked to a thick puree, and, if desired, seasoned as for the regular dish of *dal*. Add the strained tomato. Brown the onion in the butter, add the flour and brown slightly. Add the water and bring to a boil. Pour the *dal* and tomato into this, bring to a boil and serve.

Cream Dal Soup.

Milk, or coconut milk is added to the *dal* puree in place of the tomato and water, adding the flour and browned onion.

Spinach Soup.

1½ Cups spinach pulp.
4 Cups milk.
1 Tablespoon butter.
1½ Tablespoons flour.
1 Teaspoon grated onion.

Rub the cooked spinach through the colander. Blend the flour with a little of the cold milk, add to the hot milk and bring to a boil. Brown the onion in the butter, add the spinach pulp and mix this with the hot milk sauce. Salt to taste.

Wash one seer of spinach in several waters. Put on to cook with only the drops of water remaining on the leaves, thus conserving flavours and salts of the spinach. When tender rub through a colander, saving all the juice for the soup.

Water may be used in place of the milk in this soup. Serve with a teaspoonful of cream to each plate of soup.

Peas Soup.

1½ Cups green peas puree. | 3 Cups milk.
1 Tablespoon chopped green celery or parsley.

Cook green peas and press through a colander to make puree. Bring the milk to a boil, add peas puree and celery. Cook for five minutes and serve with toasted croutons.

The plain peas soup may be made without milk, by adding sufficient water, thicken with a little flour and season with butter and salt. Fresh leaves of *soya, methi*, chopped, can be used in place of celery.

Cream Tomato Soup.

½ Seer tomatoes. | ½ Teaspoon salt.
3 Cups milk. | 1½ Tablespoons butter.
1 Teaspoon sugar. | 2½ Tablespoons flour.

Cook the tomatoes without adding any water, rub through a strainer, add the salt and sugar and cook slowly for five minutes. Prepare a white sauce by rubbing the butter and flour together in a pan set over the fire ; add the milk gradually, stir until smooth, cooking for five minutes. Mix the hot tomato with the hot milk sauce and serve at once. A dessertspoonful of cream to each serving of tomato juice in place of the milk sauce makes a delicious soup.

Cream Corn Soup.

1 Tin sugar corn. | 1 Tablespoon flour.
4 Cups milk. | Salt to taste.
1 Tablespoon chopped celery leaves for flavour.

Press the corn through a colander, discarding only the tough skins of the corn. Blend the flour with a little of the cold milk and add to the hot milk. Cook slowly for ten minutes, adding

the chopped celery leaves. Mix the corn pulp into the milk sauce, bring to a boil and serve with croutons browned in butter. Fresh Indian corn, boiled on the cob until tender in boiling salted water, then cut off and rubbed through a colander, is very good in place of the tinned corn.

Brinjal Soup.

2 Brinjals (large).
1 Onion.
3 Cups of milk.
1 Tablespoon butter.
1 Tablespoon flour.
1 Teaspoon fresh sage chopped.

Cook the brinjals in their skins until tender. Remove the skins and rub the pulp through the colander. Brown the chopped onion and sage in the butter; add the flour, stir, then add the brinjal pulp. Cook for five minutes. To this add the boiling milk, cook for five minutes, salt and serve.

Potato Noodle Soup.

2 Large potatoes.
4 Cups milk.
½ Tablespoon chopped parsley, celery, *methi* or *soya*.
½ Small onion.

Peel and slice the potatoes and put on to cook with the grated onion in enough boiling water to almost cover. When tender wash until smooth, add the boiling milk and sprinkle in the noodles. Cook until noodles are tender. Sprinkle the chopped flavours into the soup, salt to taste and serve.

Noodles:—To one yolk of egg add a little salt and mix in enough flour to make a stiff dough. Roll out on a board with a rolling pin or bottle until almost as thin as a sheet of paper. Smooth a little flour over this and roll up into a roll. Cut into very thin slices crosswise; shake out and put into the boiling soup. Cook slowly for five minutes.

Noodles may also be used in place of macaroni with tomato juice and cheese as a savoury dish.

Potato and Onion Soup.

4 Large potatoes. | 2 Large red onions.

4 Cups water.

Clean the potatoes thoroughly, but do not peel them, slice. Wash onions, removing only the first thin, outer skin, slice and boil with the sliced potatoes.

When vegetables are cooked, rub through a colander, add sufficient hot water for six servings. Salt, re-heat and serve with croutons browned in butter.

1½ cupsful milk and 1 cupful cream may be added to the soup in place of more water after the vegetables are boiled, thus making a delicious soup. Add chopped celery, parsley or fresh sage to get a variety of flavours.

Tomato Soup.

1 Seer tomatoes.
2 Cups water.
2 Bay-leaves.
1 Small onion.
1 Teaspoon salt.
1½ Teaspoons sugar.
1½ Teaspoons Marmite.
2 Tablespoons flour.

2 Tablespoons butter or coconut oil.

Cook the tomatoes, bay-leaves and water together until tomatoes are perfectly tender ; rub through a strainer. Brown the onion and flour in the butter, gradually add the tomato. Dissolve the Marmite in a little hot water, add sugar and salt and stir in the soup. Bring to a boil and serve plain or with boiled rice.

Fruit Soup.

Take equal quantities of dried fruit, such as prunes, peaches, apricots, raisins and pears ; wash them carefully and put to soak

in cold water to cover well, for two hours. Put on to cook over a slow fire in the same water as they were soaked. Add a small stick of cinnamon. Allow to cook until tender, but not mashed or broken. Add two teaspoons sago; cook until clear. Sugar to taste. Remove from fire when juice is rich and thick and when cold add two cups of orange or grape juice. Serve cold.

Tomato-Marmite Soup.

2 Cups strained tomato juice.	2 Tablespoons browned flour.
3 Teaspoons Marmite.	2 Teaspoons grated onion.
1 Cup hot water.	2 Teaspoons butter.

Brown the onion in hot butter, add the browned flour and one teaspoon sugar. Dissolve the Marmite in the hot water, add the tomato and pour into the browned flour slowly, stirring to prevent lumps. Cook for two minutes. Salt to taste and serve.

MEAT SUBSTITUTE DISHES.

In the preparation of meat substitute dishes it is essential to keep in mind the necessary elements required to make them of as good a protein food value as possible. Nuts and eggs make up the protein value in the following dishes, but these do not make up the full value of proteins that are needed for the day. The full complement is not found in any one food, thus it is necessary to partake of milk, nuts, grains, green vegetables both fresh and cooked, and fruits to get a well-balanced protein complement.

Punjab Nut Loaf.

2 Cups crushed English walnut meats.
1 Cup cooked *dalya* (crushed wheat).
1 Cup cooked browned rice.
¾ Cup milk.
½ Cup cream.
1½ Teaspoons salt.
3 Eggs.
1½ Tablespoons chopped onion.
1½ Tablespoons butter or ghee.
2 Teaspoons fresh sage or parsley chopped fine.

After washing the rice put it in a pan over a slow fire and brown it to a light golden colour before cooking. Slightly brown the *dalya* before cooking. Cook 3 tablespoonsful browned *dalya* in two-thirds cupful of boiling water. Brown the onion in the butter, also the other seasonings and add the *dalya*. Mix this with the milk and cream, and the beaten yolks of eggs.

Beat the egg whites to a stiff froth. Fold the crushed nuts, also the rice, into the milk mixture: then fold in the beaten white and turn the mixture into a buttered baking pan or small *degchi*. Bake for one hour in a moderate oven. When a rich brown, turn into a hot dish, garnish with parsley and serve with browned onions. Browned rice may be used altogether in place of the browned *dalya* or crushed wheat.

Browned Onions.

Slice six large onions into thin slices. Put two tablespoonsful of *ghee* or butter in a pan over a moderate fire and when hot drop in the sliced onions and brown to a very light golden colour. Now add two-thirds cupful boiling water. Cover and allow the onions to simmer slowly over the fire for thirty minutes, but not to brown. Salt and serve on the same hot platter with the nut loaf, if desired.

Pistachio Nut Loaf.

- 1½ Cups Pistachio nuts.
- 2 Cups green peas pulp.
- 1 Cup bread crumbs.
- ½ Cup thin cream or rich milk.
- 2 Teaspoons grated onion.
- 1½ Teaspoons salt.

Wash the nuts in cold water and plunge into boiling water for two minutes, remove and rub off the skins between clean, dry cloth, or slip them off with a sharp knife. If the nuts stand long after cleaning they turn brown.

Cook 1½ seers of peas for the pulp. Brown the fresh bread crumbs to a golden colour. Brown the onion in a very little butter. Mix the browned onion with the peas pulp, add the cream and salt and fold in the browned crumbs and nuts. Reserve a few of the nuts to sprinkle on the bottom and sides of the buttered baking pan. Fill the pan with the mixture and bake in a moderate oven forty-five minutes. Turn out the nicely browned loaf on a hot platter and surround with delicious browned carrots and fresh celery hearts.

Simla Nut Loaf.

- 1½ Cups thinly sliced Brazil nut meats.
- 2 Cups green peas pulp.
- 1½ Cups cooked rice.
- ½ Cup milk.
- ½ Cup cream.
- ½ Tablespoon butter.
- 3 Eggs.
- ½ Tablespoon grated onion.
- 1½ Tablespoons fresh celery leaves minced.
- 1½ Teaspoons salt.
- Sprig of green mint or 2 teaspoons minced fresh sage.

Scrape the brown skins from the nut meats with a sharp knife and slice meats very thin. Cook one and one-half seers of green peas in very little boiling water. Add a sprig of mint or fresh sage and when cooked rub through a colander to get the thick peas pulp. Brown the onion in the butter. Beat the egg yolks and add the milk and cream. Mix all the seasonings with the peas pulp and add the milk mixture. Fold the rice and nuts into this, being careful not to mash the rice. Beat up the egg whites until stiff and fold into the mixture. Butter a baking pan or small *degchi*, sprinkle the bottom with a few of the sliced nuts and turn the mixture into it. Bake in a moderate oven for forty-five minutes. When browned nicely turn out on a hot dish with the nuts on the top, garnish and serve hot. When cold slice and serve with sliced tomatoes with creamy, hot mashed potatoes.

Green Peas Loaf No. 1.

3 Cups green peas pulp.
⅔ Cup cream.
1½ Cups soft bread crumbs.
2½ Tablespoons finely minced fresh celery leaves.
1½ Teaspoons salt.

Cook two seers of green peas in very little water with a sprig of green mint; when tender rub through the colander to get the thick pulp. Add all the ingredients to the peas puree and turn into a well-buttered baking dish and bake for twenty or thirty minutes in a hot oven. When nicely browned turn out on a hot dish, surround with hot creamy mashed potatoes, sprinkle over all, finely minced, fresh celery leaves and serve at once.

Green Peas Loaf No. 2.

Prepare the peas as in No. 1, only adding the cream and salt and bake in a hot oven until a beautiful brown. Turn out on a hot dish and serve as ordinary peas. Removing the skins from the peas make them more digestible for those who suffer with indigestion.

Almond Nut Roast.

1½ Cups almond nut-meats.	⅓ Cup cream.
2 Cups green peas pulp.	2 Eggs.
1½ Cups fresh bread crumbs.	1½ Teaspoons salt.
½ Cup milk.	2 Teaspoons fresh sage minced.

Sprig of green mint.

Boil 1½ seer of green peas with a sprig of green mint in very little boiling water. Rub through the colander to get the peas pulp. Blanch the almonds by pouring boiling water over them, stand for five minutes and remove brown skins. With a sharp knife slice the nut-meats into thin long strips. Brown the bread crumbs to a golden brown in a little butter. Beat up the egg yolks, add the milk, cream and seasonings. Beat up the egg whites to stiff froth. Add the green peas pulp to the milk mixture, also the browned crumbs and sliced almonds, and fold in the beaten white. Turn into an oiled baking pan and bake in a moderate oven for one hour. When a beautiful brown turn out on a hot platter, garnish with sliced nuts and serve hot with scalloped potatoes and baked tomatoes.

Purchase almonds in shell unless you are certain the shelled almonds are not mixed with apricot pits.

Dal Rice Loaf.

2 Cups cooked *dal* (thick puree).	1 Tablespoon chopped onion.
1 Cup cooked browned rice.	1 Tablespoon butter.
⅔ Cup strained tomato.	1 Teaspoon sage minced.
1½ Cup crushed walnut meats.	1½ Tablespoons flour.
	1 Teaspoon salt.

Lightly brown the onions in the butter, then add the flour and brown to a golden colour ; add the *dal*, tomato and sage and cook for three minutes. Fold the rice and nuts into this mixture carefully so as not to mash the rice ; turn into a well oiled baking tin and bake in a hot oven for one hour. When nicely

browned turn out on a hot platter and serve with hot tomato sauce.

One cup of bread crumbs browned in the butter may take the place of the rice and flour.

Nut Meats.

3 Tablespoons peanut (monkey nut) paste.
1 Cup cashew nuts, crushed.
2 Cups tomato juice strained.
1 Cup warm water.
¾ Cup white flour browned.
⅓ Cup *dalya*.
1½ Teaspoons Marmite.
1½ Teaspoons sage, fresh or dry, rubbed fine.
2 Teaspoons salt.

Clean the cashew nuts carefully; remove the skins, then crush them but not too fine. Brown the white flour in a pan over the fire until a light golden brown. Cook fresh tomatoes without any water. When cooked rub them through a coarse sieve to remove the seeds and skins. Mix the peanut paste in the warm water to make smooth, add the salt, sage, also the Marmite dissolved in a tablespoon of hot water. Add the hot strained tomato and gradually beat in the browned flour and *dalya*. Add the crushed nuts and turn the mixture into two buttered tins with close fitting covers, filling them half full, and stand them in a *degchi* half full of boiling water, cooking over a slow fire for three hours. The full amount may be turned into a double boiler and steamed in that way, if preferred. This may be served with a brown sauce, or when cold sliced and browned in a little butter and served with browned onions.

Protose Bake.

1 lb. Protose.
2 Onions.
3 Sage leaves.
½ Cup tomato juice.
1½ Teaspoons Marmite.
1½ Tablespoons butter.

Cut the Protose into six equal slices spreading each with the Marmite and part of the butter. Brown the onions to a golden brown in a tablespoonful of the butter, adding the minced sage leaves. Salt to taste and put equal quantities of browned onions between each slice of Protose. Bring the slices together and put in an oiled baking dish. Pour over this one cup of water and the tomato juice with a teaspoon of salt. Cover and bake in a slow oven for one hour. A slow baking for one and a half hours enhances the flavour.

Baked Nuttolene.

Prepare in the same way as for Protose Bake.

Baked Nuttolene No. 2.

Cube the Nuttolene, add a little salt and two cupsful of shelled green peas. Add sufficient water to cover. Cover the baking dish and place in a hot oven to bake slowly for an hour. Serve hot.

Meatless Loaf.

2 Cups cooked haricot beans.

1½ Cups soft bread crumbs.

1 Cup crushed English walnut meats.

3 Tablespoons cream.

1 Tablespoon butter.

2 Teaspoons salt.

1 Large sweet pepper.

The large flat beans called Lima or butter beans, or other mature beans may be used in place of the haricot beans.

Soak 1½ cups dried beans over night, then put on to cook in cold water allowing them to boil continuously until perfectly tender and cooked down rather dry. Add the salt and run a knife through the beans to cut them up but not mash. Melt the butter and stir in the bread crumbs; when slightly browned add to the beans. Remove the seeds from the pepper, chop fine, and add to the bean mixture with the cream and

crushed nuts and turn into a well oiled baking pan. Bake for thirty minutes in a hot oven. When nicely browned turn out on a hot dish, garnish with walnut halves and celery hearts and serve with tomato or brown sauce, if desired.

Bean Loaf.

3 Cups cooked or baked beans.	1½ Cups fresh bread crumbs.
½ Cup cream.	1 Tablespoon chopped parsley.
½ Cup tomato.	1½ Teaspoons salt.

Prepare the beans as in Meatless Loaf, then mash them with a fork and add all the other ingredients. Turn into a well oiled pan and bake until nicely browned. Serve hot or cold.

Baked Beans.

Soak two cupsful of dried beans (preferably haricot beans) over night, then put on to cook in cold water and boil for ten minutes. Drain off the water and add three cupsful of boiling water and three cupsful of boiling tomato juice. Cook slowly for two hours, then add three tablespoons brown sugar, two teaspoons salt and turn into a deep *degchi*, or baking dish and bake for three or four hours slowly, adding boiling water, if necessary, during the baking. A half hour before removing from the oven add two tablespoons butter and brown nicely.

Stewed Chestnuts.

To prepare the chestnuts plunge them into boiling water and allow them to boil for ten minutes. Remove the shell and the inner skin with a sharp knife.

Put a little butter in a *degchi;* when hot add the chestnuts, stir for one or two minutes and add a little boiling water, cover, and allow the chestnuts to simmer slowly until quite tender but not broken. Add salt, and if desired thicken the liquid remaining with a little flour browned in butter. Serve with mashed potatoes and green peas.

Chestnut Roast.

2 Cups mashed chestnuts.
2 Cups bread crumbs.
⅔ Cup milk.
½ Cup cream.
2 Eggs.
1 Tablespoon grated onion.
1 Tablespoon chopped parsley.
1½ Teaspoons salt.
1 Tablespoon butter.

Prepare the chestnuts as for stewed chestnuts and mash. Use fresh white bread and make into crumbs. Brown the onion in the butter; add the bread crumbs and brown slightly. Beat the eggs, add the milk and cream, seasoning and chestnuts, fold in the bread crumbs and bake in an oiled baking pan in a moderate oven for forty minutes. Turn out on a hot dish and serve with a white sauce to which is added chopped green parsley.

Protose Potato Stew.

1 lb. Protose (a prepared nut food purchased in tins).
6 Large potatoes.
2 Large onions.
3 Tablespoons fresh *ghee* or butter.
4 Cups boiling water.
4 Leaves fresh or dry sage.
1 Teaspoon salt.
1½ Teaspoons Marmite.

Cut the Protose into three slices spreading each slice with the Marmite. Cut in halves. Put the fat in a deep pan over the fire, slice the onions into the hot fat and brown to a light golden colour; add the protose and brown for three minutes. Remove the protose. Put the peeled potatoes with the browned onions, add the boiling water and sage and cook for ten minutes. Then add the protose and allow all to cook together over a slow fire, or to bake in a moderate oven for forty minutes or until the potatoes are tender and beautifully browned.

To vary flavour and richness of this dish add one half cup of strained tomato, or one half cup of cream, to the savoury dish about five minutes before it is removed from the fire. Serve very hot.

BROMOSE.

A Delicious Nut Delicacy.

2 Cups honey.
1 Cup nut butter.
4 Cups browned flour.
1 Cup sultanas.

Brown white flour to a light golden brown over a slow fire, stirring so as not to burn. Either almond, peanut or a cashew nut butter may be used. Mix the nut butter with the honey, gradually work in the flour, add one half teaspoonful of salt and knead into a smooth loaf. Fold in the sultanas that have been washed and well dried. Spread out on a dish or paper one inch in thickness and cut in squares.

To add to the richness of the Bromose crush a few of the same kind of nuts as used in the butter and fold into the loaf.

To Make Peanut Butter.

Roast the peanuts in their shells and when the nut-meats have turned a very light golden brown, remove from the fire. Remove the shells and rub off the red skins and crush the nut-meats into a fine paste. This is easily done when run through a meat or vegetable mill several times. A pestle and mortar can be used if you have no mill. This smooth peanut paste may be thoroughly mixed with a little water and lemon juice, adding salt to taste, and used in place of cow's butter on bread. Use plain peanut paste in nut-meats, roasts or sauces.

Cashew nuts can be prepared by the same method.

Almond Nut Butter.

Remove the shells and to blanch them pour boiling water over the meats, allowing them to stand for five minutes. Pour off the water and remove the brown skins. Dry the meats on a clean cloth. Run the nut-meats through a mill several times

or crush in pestle and mortar until a fine paste. Add salt. Use in place of butter. An almond nut cream can be made by gradually adding cold water, mixing well, until it is the consistency of thick cream. This is a delicious cream to use over fruit, puddings and grains; also as a drink when well diluted.

White Sauce.

For vegetables or where white sauce is required.

½ Cup cream.
1½ Cups milk.
3 Tablespoons flour.
1 Teaspoon salt.

Heat the milk and cream to scalding in a double boiler, or in a *degchi* over a slow fire. Moisten the flour with a little of the cold milk and add to the hot milk and cream, stirring carefully to prevent lumps. Boil for five minutes before adding the salt. Seasonings such as finely chopped parsley, celery leaves, grated onion vary the flavours.

Browning the flour before adding the milk and cream and allowing it to boil slowly for five minutes gives the sauce a nutty flavour.

Brown Sauce.

2 Tablespoons butter or vegetable fat.
3 Tomatoes, large.
4 Tablespoons flour.
1 Tablespoon chopped onion.
1½ Cups potato water or milk.

Heat the fat, add the chopped onion and fry to a very light brown; add the flour and stir constantly until a nice brown. Cut up the tomatoes into this and stir for several minutes or until most of the liquid is evaporated. Add some of the potato water and stir until smooth and free from lumps, add the remainder of the water and cook for ten minutes. Strain and serve as a sauce for roasts or over plain boiled potatoes. Salt to taste.

Milk may be used in place of the water if a richer sauce is desired.

Browned Onion Sauce.

Slice and brown two small onions in a tablespoonful of butter; add a tablespoonful of white flour and brown slightly. Pour into this one cupful of milk and stir until boiling. Boil for three minutes. Salt to taste.

Tomato Sauce.

One cupful of strained tomato. Slice and brown two small onions in a tablespoonful of butter, add a tablespoonful of white flour and brown. Pour over this the tomato and cook for five minutes. Salt to taste. If a richer sauce is desired, add a teaspoonful of Marmite while the sauce is cooking. To make a Tomato Cream Sauce add four tablespoonsful of cream to the tomato sauce just before removing sauce from the fire.

VEGETABLE DISHES.

The reason so many vegetables are tasteless when cooked is the manner in which they have been prepared. If vegetables are allowed to stand or cooked in a large quantity of water and this liquid drained off and thrown away, it carries with it much that is valuable in food elements as well as flavouring substances. Thus the importance of preparing vegetables so as to conserve all available food and flavouring materials. Remember that Vitamin B is soluble and can be washed away in an excess of water.

Vegetables that are peeled and prepared for cooking and allowed to stand in cold water for some time, lose about fifty per cent of their food elements—a waste of protein, mineral salts and vitamins. Prepare the vegetables with as little loss as possible; either steamed or baked are delicious in flavour and retain more of their food elements. When boiling vegetables put them on to cook in just enough boiling, salted water to cover, the water being practically absorbed into the vegetable by the time it is tender and ready to be removed from the fire. Do not throw away any liquid that remains after boiling such vegetables as potatoes, carrots, peas or spinach, but pour it off and add to the soup. This liquid is rich in flavour and food elements.

If the vegetable needs more water during the cooking period, add hot water, not cold, as cold water extracts both flavour and colour from the vegetable. An exception is made in preparing soups and vegetable stews, where we want to extract the flavours into the broth. Put soup vegetables on in cold water and simmer slowly and salt just before serving.

Thin skinned vegetables as carrots and new potatoes, should be scraped if the skins need to be removed at all. Vegetables should be thinly peeled, as next to the skin lies the greater

portion of proteins and mineral salts; these would otherwise be lost with the discarded peelings. Cook vegetables only until tender. Overcooking devitalises the food elements and destroys the natural flavours.

Turnip tops make a delicious green vegetable, also mustard and dandelion greens. These should be washed in several waters to remove dirt and grit, and put on to cook in deep, boiling, salted water. Cook until tender, no longer, otherwise a bitter flavour is developed.

Spinach, young beet-root tops and Brussels sprouts may be cooked with no additional water beyond that remaining on the leaves after they have been most thoroughly washed. Cover well to enclose the steam, and turn occasionally with a fork. Twenty minutes is sufficient time for cooking. Salt just before serving.

The leafy vegetables are rich in vitamins so necessary to life. The word vitamin, so called by Doctor Funk, is derived from "vita" meaning life, and from "amine" an element closely related to protein.

Do not use large amounts of fats in preparation of vegetables as the oily coating formed around the protein particles hinder the action of the intestinal fluids on the protein. This may cause a fermented condition and auto-intoxication.

It is certainly more healthful not to use condiments such as peppers, mustard, etc., by reason of their irritating effect upon the mucous membrane of the stomach, and they also cover up the natural food flavours.

To cook dried beans or dried peas, first wash in cold water, then cover with plenty of cold water and allow to soak over night to soften. The next morning put on to cook in fresh cold water, bring to a boil and allow to simmer slowly until tender. Should more water need to be added during boiling, add hot water, not cold, as cold water added during the boiling

stage hardens the protein, making it impossible to cook them tender by any amount of further boiling. Add the salt just before removing from the fire; if added earlier it also tends to harden the protein.

The disinfecting of fruits or vegetables intended to be eaten fresh, may be done by placing these for fifteen minutes in a solution of permanganate of potash (Condies Fluid) made by dissolving sufficient permanganate crystals in water so as to produce a deep red solution. After disinfecting, wash in several washings of cold, clean, boiled water, and they are ready to serve.

Such fruits and vegetables that are to be eaten in the raw state, and can bear a dip into boiling water without destroying their flavour or freshness, put into a colander or wire sieve and dip into boiling water for one half minute; remove and immediately plunge into cold water for two minutes.

Do not use soda to preserve the green colour of the vegetables when cooking or to assure them being more tender. Soda destroys Vitamin C and as the vitamin problem is of such great importance all care should be given to preserve them.

Baked Potatoes.

Wash the required number of potatoes. Dry with a cloth and bake in a moderate oven until they feel soft when pressed with the fingers. Medium-sized potatoes usually take forty-five minutes to bake. When done, take each potato in a cloth and press gently until the whole feels soft, but do not break the skins. Serve at once.

When the potatoes are washed perfectly clean before baking, the brown skin can be eaten as well.

Potatoes may be peeled, then baked, being careful not to burn them, but they should be a delicate brown when thoroughly baked and ready to serve. Eaten with butter or a white sauce, or perfectly plain, they are delicious.

Browned Potatoes.

Wash and put potatoes on to boil in their skins. When tender, peel and place them in a baking pan. Spread a little melted butter over each one and put in a hot oven to bake to a golden brown.

Scalloped Potatoes.

6 Large potatoes.
1 Tablespoon butter.
3 Cups milk.
1 Tablespoon flour.
½ Teaspoon salt.

Wash, peel and thinly slice the potatoes. Butter a baking dish and arrange a layer of sliced potatoes in the bottom. Put over this bits of butter, a little flour and salt. Then place another layer of potatoes and sprinkle over this the remainder of the salt, flour and butter. Pour the milk over all and bake in a moderate oven for an hour or until potatoes are tender when pierced with a fork, and most of the milk absorbed or in a thick sauce. Brown the top and serve hot. The milk should cover the potatoes, and the baking dish be deep enough so as not to allow the milk to boil over when put in the oven. When new potatoes are obtainable scrub them with brush and soap, rinse in clean water and wipe off all the thin skin possible on a coarse towel, slice potatoes very thin and bake in a baking dish using just enough milk to cover the potatoes. Potatoes prepared as above contain all the food value and are delicious in flavour.

Savoury Potatoes.

6 Medium-sized potatoes.
3 Large onions.
1½ Teaspoons Marmite.
2½ Tablespoons butter or vegetable oil.
1½ Teaspoons salt.

Put the fat in a hot kettle and add the thinly sliced onions. Brown to a very light golden brown, remove from the fat and add the peeled potatoes. Brown a very little, then add the

onions, also sufficient hot water to almost cover the potatoes. Boil until nearly tender, and add the Marmite, cooking altogether until tender and a delicious brown. Thicken the sauce with a very little flour if desired, and boil for ten minutes. Serve hot. If you can bake these savoury potatoes, do so; it adds a richer flavour.

Stuffed Potatoes.

6 Rather large potatoes.
1 Cup rich milk or thin cream.
1 Tablespoon butter.
1½ Teaspoons salt.

Select smooth, even-sized potatoes. Wash thoroughly. Bake until soft. Cut off one end of each baked potato and remove the inside, careful not to break the skins. Mash the potatoes thoroughly with a fork, add the salt, butter and hot milk. Beat all together until beautifully light and creamy. If beaten too long they become sticky. Fill the skins with the seasoned potato piling it up like a white cap on each. Put them into a serving dish and place in a hot oven for a few minutes. Serve hot. If thin, hot cream is used in place of milk; do not use the butter.

Mashed Potatoes.

Wash and peel the desired number of potatoes; put on to cook until tender. Salt when almost cooked. Pour off any liquid remaining after potatoes are cooked and use it in the soup. Mash the potatoes until all lumps are removed; add sufficient hot milk to beat up the potatoes to a light, creamy consistency. Add salt to taste and serve hot. If mashed potatoes are beaten too long they become sticky instead of light and fluffy.

Potatoes and Olives.

4 Medium-sized boiled potatoes.
¾ Cup ripe olives chopped.
2 Tablespoons cream.
1 Small onion.
1½ Tablespoons butter.

Peel the boiled potatoes and cut into tiny cubes. Stone the ripe olives, chop and mix with the potato and cream. Grate

the onion and brown in the butter; add the potato mixture and turn into an oiled baking pan. Cover and bake until heated through and the bottom a light brown. Turn into a hot serving dish and serve with baked tomatoes.

Potato Cakes.

To a cup of thick *dal*, well seasoned, add one half cup of grated cheese, also a few bread crumbs to hold them together. Mix well and form into the required number of balls. Around each ball form a layer of mashed potato, roll in bread crumbs and brown in a little hot vegetable oil or butter to a golden brown. Serve with spinach for lunch.

Green Peas in Pod.

Select very tender young green peas. Do not remove the peas, but cut off the stem ends from the pods, and put on to cook in very little salted, boiling water. When tender butter and serve as French Beans. The pea pods are sweet and contain more of the vitamins and vegetable salts than do the peas themselves.

Green Peas.

To cook green peas put on to boil in hardly sufficient boiling water to cover. When tender, the water should be mostly absorbed; season with butter, if desired. The fresher and more tender the peas the smaller the amount of water is needed to cook them.

Peas with New Potatoes.

Select small, new potatoes, scrape off the thin, outer skin and put on to boil with tender green peas. When the potatoes are cooked add a little milk, a very little flour and butter to make a sauce over the vegetables. The peas and potatoes may be served plain without sauce. Serve with rice and nut balls for lunch.

Baked Onions No. 1.

12 Large white onions.
1½ Tablespoonsful butter or *ghee.*
1 Teaspoon salt.
1 Teaspoon brown sugar.

Peel the onions and cut in halves, crosswise, and place in a buttered baking dish. Add the butter and seasoning and one cup of water. Cover and bake for one hour in a moderate oven. Serve on strips of hot toast, garnish with parsley.

Baked Onions No. 2.

Remove the outer skin of large, red or white onions; cover with water and cook until tender. Drain and place in a well-buttered baking dish. Sprinkle with bread crumbs and bake for fifteen minutes in a hot oven. Serve on toast, if desired.

Baked Tomatoes.

Select firm, ripe tomatoes. Wash and place in a buttered baking dish. Over twelve tomatoes sprinkle 1 teaspoonful salt and 1 tablespoonful sugar. Dot the tops with tiny bits of butter and a wee bit of Marmite, add a clove or two and bake for one hour in a hot oven. Do not add water. Serve on bits of hot-buttered toast, if desired.

Breaded Tomatoes.

Peel the required number of tomatoes and put on to cook without water. When done season with salt, a little butter and sugar; and break tiny bits of toasted bread into the tomatoes. The tomatoes may be served just this way or turned into a buttered baking dish and baked in a hot oven for twenty minutes.

Stuffed Tomatoes.

Select medium-sized, firm tomatoes. Cut off stem end and carefully remove the seeds. Refill with a dressing made

from one cup of toasted bread crumbs, one and one half teaspoonsful Marmite dissolved in two tablespoonsful of hot water, a pinch of sage and salt to taste. Brown one teaspoonful grated onion in a little butter and moisten all sufficiently with thin cream. Mix well and fill the tomatoes. Bake in a hot oven. Serve hot.

Another filling is one cup toasted bread crumbs, ½ cup crushed walnut meats, a little sage, thyme and grated onion, moisten with a very little water or cream and salt to taste.

Cauliflower.

Select heads of cauliflower with the tiny white and green leaves in and about the flower. Do not cut these away, but cook with flower head, as these contain more vitamins than the white flower. Wash carefully and cook in salted, boiling water, just sufficiently long to become tender. Remove from water and serve plain or with a white sauce or melted butter.

Cabbage.

Select small, solid heads. Cut in quarters and wash carefully. Put on to boil in salted, boiling water just enough to cook the cabbage. Cook sufficiently to become tender, no longer, as the longer cabbage is cooked the more difficult it is of digestion. Serve with a little lemon juice and hot cream.

Chard.

Chard should be cooked in much the same way as cabbage.

Baked Carrots No. 1.

Scrub the carrots and cut in halves lengthwise. Butter a baking dish and put the carrots in this. Sprinkle with a little salt, add a very little boiling water, cover and bake until tender. Serve hot, plain or with milk sauce.

Baked Carrots No. 2.

Scrub and boil carrots in their skins. Grate. To two cupsful of the grated carrots add one cupful of cooked rice. Add one beaten egg. ½ cup milk or cream, ½ teaspoon of ground cinnamon, a wee pinch of nutmeg, 1 teaspoonful salt, ¼ teaspoonful sugar. Mix altogether and put into a buttered baking dish. Dot with bits of butter and bake in a hot oven for fifteen minutes. Serve as a vegetable.

Browned Carrots.

Scrub the desired number of carrots in plenty of fresh water. Cut in halves lengthwise and put on to steam in a colander placed over boiling water in a *degchi*. (They may be boiled in the least water possible to get them tender.) When the carrots are tender have a frying pan very hot, butter it a very little and brown the carrots to a beautiful brown, salt and serve at once.

Pumpkin.

White pumpkin is delicious steamed and served with a white sauce in which is melted a little cheese.

Red pumpkin is nice steamed or boiled until dry. Mash and season with salt and butter and serve with Nut Meat.

Small pumpkins are very nice when peeled and boiled in salted water until half done; remove from the water, cut off stem-end and remove the seeds and stuff with a nut mixture as for cucumber. Bake in a moderate oven for forty-five minutes and serve with a tomato sauce.

Mashed Turnips.

Peel and wash the turnips. Cut into thin slices and put in a *degchi* to bake in a moderate oven until tender.

Mash until smooth, add salt and a very little butter or cream, mix and re-heat. Serve on hot, buttered toast.

Turnips contain a great deal of moisture and need no additional water when baked in the oven. Baking enhances the flavour of either the yellow or white turnips.

Brinjal Bake.

Select large, firm brinjals. The following recipe is for three brinjals: Put the brinjals on to boil; when half cooked remove from the water and peel off the skin very thinly. Cut off the stem-end and carefully take out the pulp, leaving the shell unbroken. To the pulp add ½ cup of tinned or fresh asparagus heads, one small onion minced, one sweet pepper chopped and seeds removed; ¾ cup of English walnuts crushed, two eggs and one cup fresh bread crumbs. Mix the ingredients and salt to taste. Wipe the inside of the brinjal shells with a clean cloth and fill with the mixture. Put these in a baking pan with a little butter. Occasionally dip the juice over the brinjals while they are baking. Bake in a moderate oven for 40 minutes. Garnish with sliced cucumber and parsley. Serve either hot or cold.

Tomato Jelly.

2 Cups strained tomato juice.

½ Teaspoon Marmite.

1 Cup cooked vegetable gelatine (Agar-agar).

½ Teaspoon salt.

½ Teaspoon sugar.

Cook one half seer of fresh tomatoes with one bay-leaf, one mint leaf and a slice of onion. Add no water. When tomatoes are cooked strain, squeezing out the pulp; then add salt and sugar and Marmite. Mix well and add the hot vegetable gelatine. Pour into a mould, previously wet in cold water, and allow to stand until cold. Turn into a cold dish, garnish with sliced beetroot and water cress, and serve.

Cucumbers.

Cucumbers or the small white pumpkins are delicious when stuffed and baked. Peel and parboil in boiling water. Drain and cut in half crosswise, remove the seeds and stuff the halves with the following mixtures: Boiled rice or the same quantity in bread crumbs, also half the quantity of crushed English walnuts as of rice. Add salt, grated onion and sage, and sufficient tomato juice to make a stiff mixture. Pack into the halves and place in an oiled baking pan, dot with bits of butter, cover and bake in a moderate oven. When tender remove the cover, brown quickly and serve hot as a vegetable.

SALADS.

Leafy vegetables used in salads are valuable, in that they introduce fresh, raw material into the dietary, and are rich in vitamins and mineral salts; also containing protein-building elements of particular value. They are regarded as protective foods, and in eating freely of these, also of the raw vegetables themselves and the fresh fruits, we provide the body with invaluable elements for maintaining good health. These are, in fact, absolutely essential to life. Vitamins A and B are supplied in fresh fruit and green vegetables. Vitamin C is most abundant in fresh juicy fruits and green vegetables. Eat them too, to get rid of the sallow, muddy complexion. A shortage of Vitamin A is a controlling factor in causing rickets, malnutrition and eye disease. A shortage of Vitamin B retards growth, causes loss of appetite, lack of vigour, depression and anæmia. Shortage of Vitamin C causes malnutrition, decay of teeth, scurvy, general ill-health, and pains in the legs.

Such important fresh leaves as spinach, lettuce, cabbage, onions, celery and water cress, and raw vegetables as carrots, green peas, cucumbers and fresh tomatoes; also the fresh fruits—oranges, apples, dates, bananas, pineapples, etc., may be combined to make a great variety of delicious salads. At least one meal a day should contain one or more of the fresh, raw foods in which the vitamins are abundant. Most left overcooked foods, either fruits or vegetables, can be well utilized in salads.

Use lemon juice instead of vinegar in salad dressings. It imparts a delicious flavour, and contains natural salts and vitamins too, so necessary to good health. Lemons and oranges are known as acid fruits, yet the reaction when taken into the system is alkaline, and is valuable where excess acidity, due often to such acid-producing foods as bread and meats, is present.

It is most necessary to maintain an alkaline condition of the blood, so use foods that produce the alkaline reaction. *Hence eat fresh fruits and raw, fresh vegetables daily.*

In the preparation of salads the ingredients should not be stirred, but tossed together and served to look as dainty and taste as palatable as skill can make them.

In making the salad dressings be careful in the selection of oil. It must be fresh and free from strong flavours. A good vegetable oil is often preferred to olive oil, and is less expensive. An evaporated or condensed milk, also cream, can be used in place of oil, making a very good dressing, and with many people it is more easily digested than the oils.

All ingredients for the salad and the salad dressing should be cold before they are put together, and such fruits as apples and bananas are better peeled and sliced into the dressing just before serving to prevent them from turning brown.

Use the rotary egg beater or egg whip in place of a fork in making the dressings, as it permits of more thorough beating in less than half the time. Garnish salads with nuts, flowers, or green leaves.

Heavy salads are more suitable for lunches and may form the main dish of the meal, while the lighter fruit salads may be substituted in place of pudding at a heavier meal.

Fresh Vegetable Salad.

1 Cup grated carrots.
1 Cup tender green peas.
1 Cup celery cut fine.
5 Young onions : the tender white table onions.
½ Cup mayonnaise dressing.
2 Tablespoons cream.

Slice the onions in very thin slices and mix with the peas and carrots. Mix the cream with the mayonnaise dressing. Reserve half for the carrots and the other half pour over the vegetables and toss them together with a fork.

Shred crisp lettuce leaves and line a salad bowl. Place the vegetables in a heap in the centre and make a ring of the grated carrots mixed with the dressing around the vegetables. Dot the top with a few candied red cherries and finely shredded lettuce and serve cold.

Cooked Vegetable Salad.

1 Cup boiled potatoes, diced.
1 Cup green peas boiled.
2 Beets boiled.
3 Hard boiled eggs.
5 Young onions : the tender white table onions.
1 Cup celery cut fine.
1 Cup mayonnaise dressing.

Line a salad bowl with fresh crisp lettuce. Slice the onion thin. Mix the vegetable, all but the beets, with the mayonnaise dressing and heap in the centre of the lettuce bed. Slice the beets and make a ring of the slices around the vegetables. Cut the eggs in halves and place around the top. Squeeze a little fresh lemon or lime juice over the eggs, beets and lettuce. Sprinkle a few shreds of lettuce over the whole and serve with brown bread and butter and a glass of milk. A good lunch.

Stuffed Tomato Salad.

Select large, firm tomatoes, the number desired. Remove the skin carefully with a sharp knife. Cut off a thin slice from the blossom end and remove the seed portion without breaking the tomato.

To a sufficient amount of cream cheese for filling the tomatoes, add a little thick cream and chopped pistachio nut, walnuts or almonds. Fill the tomatoes, and on the top of each put a teaspoon of mayonnaise dressing or whipped cream. Serve on fresh lettuce or water cress leaves. Nuts may be omitted altogether and tiny yellow sultanas used in their place.

Other fillings as cooked potato diced, and green peas mixed with a little chopped onion and parsley; or diced celery and sliced hard boiled eggs, may be used. Mix either of these with a generous amount of mayonnaise dressing. Fill the tomato cases, garnish with lettuce and serve.

Walnut Fruit Salad.

6 Dates.
1 Slice pineapple.
1 Orange.
12 Walnut-meat-halves.
1 Plantain.
Fresh lettuce.

Remove stones from dates and cut in halves. Cut up pineapple and shred the orange, slice the plantain. Arrange all on the fresh lettuce placed on a salad plate. Cover with a golden dressing and garnish with walnut-meats and serve. This salad is a full lunch with bread and butter and a glass of milk. This is sufficient salad for one person.

Cream Cheese Salad.

Prepare the curds of milk adding a little salt and cream. Mix well. Remove the seeds from a large, red, sweet pepper, chop the fleshy portion very fine and mix with the cream cheese, using two teaspoons of chopped pepper to one cup of cream cheese. Add a little cream and mix. Serve on fresh lettuce or water cress. Sprinkle the top with crushed salted pea-nuts, pistachio nuts, or walnuts. Chopped green celery leaves or chopped young carrot tops may be used in place of the nuts.

Fruit Cream Cheese Salad.

Prepare the curds of milk, add a little salt and mix with cream, sufficient to form into balls. Clean, wash and wipe a few small, yellow sultanas, a half dozen for each small cheese ball, mix with the cheese before forming into balls. Open a tin of peaches, remove the halves, carefully draining off the

peach juice. Fill each half with a cheese ball, place on crisp lettuce leaves, and serve with a tablespoon of peach juice. Fresh peaches, guavas, pears, dates or oranges are delicious in place of the tinned fruit.

Steamed prunes, or other stewed fruits served with cream cheese on fresh lettuce or water cress, make delicious salads.

Cheese balls served on a dish of grated fresh carrots, garnished with carrot tops, is a wholesome salad. Carrots should be washed well and grated with their skins on, not cooked, when used for salad.

Cabbage Salad.

Cut fresh, tender cabbage into very fine shreds. Season with sliced green onions, and mix with mayonnaise dressing. Cream cheese balls may be served with this salad.

Carrot Salad No. '.'

1 Cup shredded cabbage.
2 Cups grated fresh carrots.
¼ Cup tender green carrot leaves.
1 Teaspoon grated onion.
2 large heads lettuce finely shredded.
½ Cup chopped leaves celery and whitestock.
½ Cup mayonnaise dressing.

Wash all the leaves and chop fine. Wash carrots carefully (do not scrape off the skins) and grate. Carefully mix the grated carrots, onion, cabbage and leaves. Line a salad bowl with the shredded lettuce, heap the carrots in the centre and cover with the mayonnaise dressing. Sprinkle the top with a few of the shredded lettuce. Water cress may be used in place of lettuce.

This salad served with a large glass of whole milk, entire wheat-bread and butter make up an entire lunch.

Carrot Salad No. 2.

2 Cups grated fresh carrots.
½ Cup chopped walnut meats.
1 Cup chopped celery leaves or stalks.
1 Tablespoon chopped parsley.
1 Cup cream cheese.
½ Cup boiled salad dressing.

Mix the first five ingredients and form into small balls. Serve on lettuce or water cress leaves; a little salad dressing on top of each ball. Plain cream may be used in place of salad dressing.

Apple and Date Salad.

1½ Cups diced apples.
1½ Cup finely chopped dates.
¾ Cup sliced Brazil nuts.

Mix the date and apple, arrange on plates. Pile on top of each a generous portion of cream dressing, sprinkle the top with the nuts and serve on fresh lettuce with bits of fresh celery laid on the plate beside the salad..

Peas and Apple Salad.

Peel and cut apple very fine, add boiled peas and mix with a little mayonnaise dressing. Serve on crisp lettuce.

Date Salads.

Wash, stone and staff dates with cream cheese and serve on fresh lettuce. Sprinkle a few drops of lemon juice over the leaves and dates. This makes a delicious salad.

Sultana Salad.

2 Cups sultanas.
2 Cups diced apples.
2 Cups sliced plantains.

Clean the sultanas carefully, wash and dry. Mix all the ingredients with boiled dressing and serve on crisp lettuce, celery leaves or shredded white cabbage.

Fruit Salad No. 1.

4 Oranges.
1 Small pineapple or one tin sliced pineapple.
4 Plantains.
½ Cup sliced almonds.

Remove the white skin from the sections of the oranges and separate the sections into small bits. Add the pineapple cut into small bits, and sliced plantains.

The dressing is made from four tablespoons orange juice, four tablespoons pineapple juice, and two teaspoons lemon juice. Add one teaspoon sugar and heat over the fire; thicken with one half teaspoon corn flour blended in a little of the cold juice. When cold pour over the fruit, serve on crisp lettuce and sprinkle the top with the nuts.

Fruit Salad No. 2.

1 Cup stewed prunes (pits removed).
½ Cup sultanas.
¾ Cup figs.
3 Oranges shredded.
2 Tablespoons lemon juice.
¾ Cup of mixed prune, sultana, fig, and orange juice.
1½ Cups vegetable jelly hot.
2 Tablespoons sugar.

To the hot vegetable jelly strained, add the sugar, lemon juice and half cup of mixed juices; bring to a boil and cook two minutes. In the desired number of cups, dipped in cold water, pour the juice and into each cup put the fruit divided equally. When cold run a knife around the inside of the cups, turn out the jellied salad on dishes and serve on crisp lettuce with cream salad dressing. This salad may be served without the vegetable jelly, on fresh lettuce with plain cream. Wash the sultanas, dip in boiling water and dry with a clean cloth. Wash the figs and stew them in very little water until tender, cut up into tiny pieces ready for the salad.

DRESSINGS.

French Dressing.

2 Tablespoons oil. | 2 Tablespoons lemon juice.
¼ Teaspoon salt.

Stir the salt in the oil with a fork, then beat the lemon juice into the oil drop by drop until it thickens and is creamy. When this dressing is allowed to stand it separates.

Use this dressing with the leafy vegetables as cooked spinach, dandelions, beet or turnip tops, also fresh cucumbers.

Boiled Salad Dressing.

1 Egg yolk.
½ Cup cream or unsweetened condensed milk.
1 Teaspoon corn-flour.
2 Tablespoons lemon juice.
2 Teaspoons salad oil.
¼ Teaspoon salt.

Heat the cream in a sauce pan set into boiling water. Blend the corn-flour with a very little cold milk and stir into the hot cream. Cook for five minutes.

Beat the yolk of the egg, add the oil, lemon juice and salt, mixing well. Gradually pour the boiling cream into the egg mixture, stirring constantly. Return to the fire for one minute. Remove at once. Cool and serve on the salad.

Cream Dressing.

½ Cup thick cream.
1 Teaspoon sugar.
1½ Tablespoons lemon juice.
¼ Teaspoon salt.

Beat the cream until quite stiff; add sugar and salt, then gradually add the lemon juice. This dressing should not be made until the salad is prepared and ready to serve. A thick, unsweetened condensed milk may be used in place of the cream. This dressing is delicious over fruit salad.

Mayonnaise Dressing.

2 Egg yolks.
2 Tablespoons lemon juice.
1 Cup salad oil or olive oil.
1 Teaspoon salt.

Beat the egg yolks until thickened and add half the salt: now add the oil drop by drop, beating constantly until you have added one tablespoonful. Now begin adding the oil a third teaspoonful at a time, beating continuously, and when the mixture becomes very thick, thin it with a little lemon juice. Continue to beat in more oil until all is used. Use the lemon juice to make the dressing of the right consistency. Now beat in the remainder of the salt.

If the mixture should curdle, take another yolk or the white of the egg in a clean bowl, beat until stiff, then gradually beat into this the oil mixture, just a half teaspoonful at a time.

Mayonnaise may be made with the whole egg, beating the white and yolk together and proceeding as above. To make a cream mayonnaise dressing, add half a cup of condensed milk or ordinary cream, to the above recipe, just before the salad is to be served.

Golden Salad Dressing.

4 Tablespoons orange juice.
4 Tablespoons lemon juice.
½ Cup sugar.
2 Eggs.

Beat the eggs to blend the yolk and white, yet not until foamy. Add the juices and sugar and cook over boiling water, stirring constantly until thickened. Set in cold water to cool.

CHEESE DISHES.

Cheese to be eaten at all should be perfectly fresh. It quickly decomposes, and instead of a sweet, mild cheese, takes on a strong flavour and greenish spots appear through it. Such cheese is germ-laden and should never be used as a food.

Cheese Savoury.

1½ Cups fresh bread crumbs.
2 Cups grated cheese.
2 Cups milk.
2 Eggs.

Place crumbs on the bottom of a well-buttered dish, cover with the grated cheese. Beat the eggs and add to the milk, add a little salt; pour over the ingredients in the dish and allow to soak for ten minutes before putting into a moderate oven. Bake as you would custard and serve hot.

Creamed Eggs with Cheese.

8 Eggs.
1 Cup grated cheese.
2 Tablespoons butter.
½ Teaspoon salt.
½ Teaspoon sugar.

This egg dish is quite substantial enough to be the chief dish for lunch. Serve with creamy mashed potatoes and a fresh lettuce salad. Have the potatoes cooked, mashed and whipped to a cream, and very hot before you put the egg mixture over the fire. Allow two eggs to each person. Break the eggs into a smooth, clean pan, add the salt and sugar and beat until light and frothy. Add the butter and grated cheese to the egg mixture and set the pan over a slow fire; stir continually until the mixture thickens into a smooth cream. Remove from the fire at once, otherwise the eggs will curdle, spoiling the dish. Dish up the potatoes on hot plates, making a nest in the centre of each heap, and fill with the eggs. Sprinkle a bit of chopped celery leaves or parsley over the top and serve while piping hot.

Macaroni Cheese Savoury.

8 Long sticks macaroni.
2 Cups fresh milk.
3 Eggs hard boiled.
3 Tablespoons grated cheese.
1 Tablespoon butter.
Grated nut-meg.

Break macaroni in inch lengths and cook in the milk in a double boiler. When cooked add the cheese, allowing it to melt, and salt to taste.

Butter a baking dish and spread over the bottom half of the cooked macaroni and cheese. Cut the eggs in slices and place on the macaroni, add the remainder of the macaroni and grate over all a wee bit of nut-meg, placing small bits of butter on the top. Brown in a quick oven and serve hot.

Macaroni Tomato Savoury.

1½ Cups macaroni broken in inch lengths.
2 Cups strained tomato.
¾ Cup grated cheese.
1½ Tablespoons flour.
1 Teaspoon sugar.
½ Teaspoon salt.

Drop macaroni into plenty of boiling, salter water, allowing it to cook until perfectly tender. When cooked pour over the macaroni several cups of cold water to prevent bits of macaroni from sticking together; drain.

Blend the flour in one half cup of the strained tomato. Bring the remainder of the tomato to a boil and add the blended flour, stirring until smooth. Add the sugar and salt, also the grated cheese, allowing it to melt.

Turn the macaroni into a buttered baking dish, add the tomato sauce, sprinkle a few bread crumbs over the top and bake in a hot oven for twenty minutes. Serve from the baking dish.

The cheese may be omitted and macaroni and tomato prepared as above.

Tomato with Cream Cheese.

6 Medium-sized fresh tomatoes.
1½ Cups cream cheese.
¾ Cup bread crumbs.
1½ Tablespoons butter.
½ Teaspoon salt.

Place layer of sliced, peeled tomatoes in the bottom of a buttered baking pan. Over this place a layer of cream cheese and bread crumbs. Repeat, having the bread crumbs on the top. Salt and dot with bits of butter. Bake until top is a nice brown. Garnish with green parsley and serve hot.

Scalloped Cabbage Savoury.

1 Small head cabbage.
2 Cups milk.
2 Tablespoons flour.
⅔ Cup grated cheese.
½ Teaspoon salt.

Slice the cabbage into fine shreds and wash in cold water. Put on to cook in boiling, salted water for fifteen minutes, drain, and put this partially cooked cabbage into a baking dish. Pour over this the white sauce, sprinkle with bread crumbs and bake in a moderate oven for twenty minutes.

To make the white sauce, blend the flour with a little of the cold milk, add this to the remainder of the milk that has been brought to a boil, and cook ten minutes, stirring to avoid forming lumps. Add the grated cheese, cook slowly allowing cheese to melt. Pour this sauce over the cabbage.

Cauliflower Savoury is made by the same recipe using cauliflower in place of cabbage.

Onion Cheese Savoury.

Remove the thin, other skin from sixteen small even-sized onions. Cook them in plenty of boiling water until tender drain and place them in a buttered baking dish. Add four tablespoons grated cheese to one cupful of hot, white sauce,

allow the cheese to melt and pour this sauce over the onions. Sprinkle the top with bread crumbs and bake in a hot oven for twenty minutes. Make the white sauce as in Scalloped Cabbage Savoury.

EGG DISHES.

Egg and Cheese on Toast.

4 Slices of white bread.
6 Eggs.
½ Cup fresh milk.
8 Tablespoons grated cheese.
½ Teaspoon salt.

Toast the bread to a nice brown, butter and cover to keep warm. Add the salt to the eggs, beat until light and add the milk. Heat the frying pan very hot, preferably an iron one, and butter it a little to prevent the eggs from sticking; pour in the beaten eggs and draw the pan to a slower fire. Stir gently from the bottom, allowing the eggs to thicken to a thick custard, but not to separate.

Remove from fire immediately and dish up on the slices of toast each piece having been moistened with a tablespoon of hot cream. Grate delicious fresh cheese over the top and garnish with finely shredded lettuce leaves. Serve at once. This is a splendid dish for either breakfast or lunch.

Tomato Egg Toast.

Toast the required number of slices of bread to an even brown, butter, and cover to keep warm. Poach one egg for each toast. Put one tablespoon cream over each toast and put an egg on each piece. Cover with thick tomato sauce and grate a thick covering of cheese over the top. Serve hot for lunch. Sprinkle shredded lettuce or fresh celery leaves over the top of each serving.

Stew one small tomato for each piece of toast. Cut the tomatoes, put on to cook without water; cook for ten minutes. Rub through a strainer, add salt to taste and a tiny bit of sugar. Thicken the strained tomato with a little flour, one tablespoon of flour to one cup of strained tomato. Cook for five minutes.

A cupful of sauce is needed for six toasts. Pour this hot tomato sauce over the poached eggs on toast. Poach the eggs in this sauce, if desired, putting in one egg at a time to poach.

Baked Eggs in Tomato.

Prepare a tomato sauce as in the above recipe, and when it is boiling hot break the required number of eggs into it; sprinkle bread crumbs over the top, a little salt and tiny bits of butter. Put into the oven and bake until the eggs are cooked. The eggs may be baked in individual dishes and served in these.

Poached Eggs Plain.

Have a pan of boiling water large enough so that the water will cover the eggs. Break the required number of eggs separately into a small dish and slip each into the boiling water. Do this gently so as not to break them or scatter the white through the water. When all the eggs have been put in, cover the pan and remove from the fire, allowing the eggs to stand until they are either soft or hard poached. Remove carefully from the water and serve on hot, buttered toast. Sprinkle the top of each poached egg with fresh, green celery, parsley or carrot leaves chopped fine.

Poached Eggs in Tomato Juice.

Stew and strain fresh tomatoes, add salt and when juice is boiling add the number of eggs desired and poach. Serve on hot toast.

Baked Eggs in Cream.

Break the desired number of eggs in hot cream and put into the oven. Bake the eggs until they are either soft or hard. Dish up carefully and serve on mashed potatoes.

Scrambled Eggs.

To six eggs add one half cup of rich milk and one half teaspoon salt. Beat until smooth and pour into a hot, buttered frying pan. Stir the eggs gently from the bottom until set to a thick, creamy custard but not too hard a consistency. Remove from the fire at once or it becomes watery. Serve immediately while hot and fluffy. Serve on toast, if desired.

Jellied Eggs.

To jelly eggs slip them into a pan of boiling water, cover, and remove the pan from the fire. Allow the eggs to remain in the hot water for ten minutes. Small eggs take less than ten minutes to jelly. Jellied eggs are more easily digested than when the whites are cooked more solidly.

Souffles.

Foundation for simple souffle :

2 Tablespoons flour.	3 Eggs.
2 Tablespoons butter.	1 Cup milk.

½ Teaspoon salt.

Melt the butter and add the flour gradually to it, stirring into a smooth paste ; then gradually add the cold milk, stirring constantly. Cook to a thick, white, creamy sauce. Add the salt and remove from the fire ; then beat in, one at a time, the yolks of the three eggs. Let this mixture cool somewhat while you beat the whites of the three eggs to a stiff, dry froth. Fold them into the golden sauce very carefully, and pour the mixture into a well-buttered baking dish. Set the baking dish into a pan of hot water and bake for twenty minutes in a moderate oven. Serve at once, otherwise this airy souffle will fall.

Cheese Souffle.

Use the foundation recipe, adding three quarters of a cup of grated cheese and one teaspoon of lemon juice. The cheese is added to the sauce before the beaten whites are folded in, and the lemon juice is added to the beaten whites of eggs.

A cup of green peas either whole or pressed through a fine sieve and added to the foundation recipe makes a peas souffle. Other vegetables such as spinach, carrots, corn pulp or green beans, may be selected for various souffles, using the foundation recipe.

A teaspoon of chopped green parsley or celery leaves or the same quantity of finely grated onion adds flavour to the vegetable souffles.

An excellent dessert can be made by adding a little fresh or stewed fruit to the foundation souffle and serve with cream. Two tablespoons of sugar should be added to the white sauce before the yolks are beaten in, so as to sweeten the souffle.

PUDDINGS.

Cup Custard.

2 Cups milk.
4 Eggs, small.
4 Teaspoons sugar.
½ Teaspoon nut-meg or cinnamon.
⅓ Teaspoon salt.

Beat the eggs until well mixed; add all other ingredients and pour into six small cups. Set in a pan of hot water and bake in a moderate oven until custard is firm, not longer. Brown the top and serve either hot or cold.

Caramel Pudding.

1 Cup hot milk.
1 Cup cold milk.
4 Eggs, small.
3 Tablespoons sugar.
½ Teaspoon vanilla.

Place the sugar in a pan over the fire, melt and brown to a light golden colour. Do not stir, yet be careful not to burn the sugar. When thoroughly melted, add the hot milk slowly, stirring constantly.

Beat the eggs, add the cold milk and a wee pinch of salt; then slowly stir into the hot milk. Strain into a pudding bowl, set the bowl in a pan of hot water and bake in a moderate oven until custard is firm. Remove from the oven at once. Serve cold.

Caramel Fluff.

1½ Cups milk.
5 Eggs.
2 Tablespoons corn-flour.
3 Tablespoons sugar.

Brown the sugar in a pan over a slow fire until a golden brown. Add the milk and allow the caramel to dissolve. Blend the corn-flour with a couple of tablespoonsful of cold milk and when milk is boiling add the blended corn-flour, stir and boil

five minutes. Beat the white of eggs to a stiff froth with a pinch of salt, add four drops vanilla and fold the whites into the boiling custard one spoonful at a time. Allow it all to boil for one or two minutes. Remove from the fire.

The yolks of eggs should be hard boiled and mixed with a little lemon juice and salt and used with a salad, or mashed and added to the soup. Yolks are rich in Vitamin B.

Snow Pudding.

1 Cup milk.
1½ Tablespoons sugar.
3 Egg whites.
1½ Tablespoons corn-flour.
1 Tablespoon lemon juice.
Pinch of salt.

Blend the corn-flour with a little of the cold milk. Heat the remainder of the milk to boiling, add the sugar, and stir into this the smooth corn-flour. Stir and cook slowly for five minutes. Beat the egg whites to stiff froth, add salt and lemon juice. Fold the beaten whites into the boiling milk mixture and allow to cook one minute. Remove from the fire at once and turn into a wet mould and cool. Serve plain or with fruit sauce.

Boil the egg yolks until hard, mash until a fine paste and stir this into your hot peas or tomato soup just before serving for lunch.

Date Pudding.

2 Cups milk.
3 Tablespoons corn-flour.
1 Cup chopped dates.
1½ Tablespoons sugar.
¼ Teaspoon vanilla.
4 Drops almond extract.
½ Tablespoons butter.

Wash the dates thoroughly, dry with a cloth and remove stones and chop dates. Blend the corn-flour in a little of the cold milk. Heat the remainder of the milk, add the sugar and bring to the boiling point, then add the corn-flour and cook

slowly for ten minutes. Add the chopped dates and butter and bring to a boil. Remove from the fire and add the extracts. Turn into a wet pudding mould to cool. Serve plain or with custard sauce or cream.

Baked Apple Tapioca Pudding.

½ Cup tapioca.
½ Cup water.
3 Cups milk.
6 Apples.
1 Tablespoon butter.
5 Tablespoons sugar.
½ Teaspoon powdered cinnamon.
½ Teaspoon vanilla.

Soak the tapioca in the water for one hour. Put into a double boiler with the milk and cook until clear and thick. Add the vanilla. Peel and core the apples, putting them into a baking dish, filling the cavity in each apple with the sugar, butter and cinnamon and allow them to bake for 20 minutes. Pour tapioca over apples and continue to bake until tender. Cool and serve plain or with custard sauce or cream.

Sliced plantains or guavas may take the place of apples. The milk may be omitted using more water and more butter instead.

Fresh Peach Tapioca Pudding.

½ Cup tapioca.
4 Cups milk.
1 Tablespoon butter.
2 Tablespoons sugar.
1 Teaspoon vanilla.

Cook the tapioca with the milk in a double boiler until tapioca is clear and thick. Add the sugar and a pinch of salt. Cook for ten minutes more, add the vanilla and butter and remove from the fire.

Line a serving dish with sliced fresh peaches, or with tinned peaches, or with dried peaches that have been stewed and sugared and pour over them the hot tapioca. Cover with sliced peaches, cool, and serve plain or with cream.

Other stewed fruits as prunes, pears, apricots or raisins may be used in this pudding. The tapioca may be cooked in three cups of water instead of the milk, and more butter used.

Prune Cereal Pudding.

¾ Cooked *dalya*.
1 Cup hot milk.
2 Eggs.
2 Tablespoons sugar.
1 Cup prunes, cooked, stones removed.

Mix ingredients and pour into a buttered baking dish. Set into a pan of hot water and bake in a moderate oven until firm. Serve hot or cold.

Stuffed Dates.

Wash dates carefully in cold water; immerse in boiling water for one minute. Dry between two dry cloths. Cut into halves, remove the stones and stuff the dates with walnut, peanut, pistachio or almond meats. Press the cut edges together, dip one end in lemon juice and roll in powdered sugar. Serve as a delicious sweet. They are rich in nourishment. Dates stuffed with cream cheese are very nice.

Steamed Figs.

Wash the dried figs in hot water, cut off the stem end, and place in a strainer over boiling water. Cover and steam until soft and tender. Serve hot or cold.

Steamed figs may be stuffed with nuts and served as a dessert.

Dried figs can be stewed as any dried fruit.

Dried Fruits.

Dried fruits as apricots, peaches, pears, apple rings, figs or prunes are most delicious served as stewed fruit for breakfast, or in place of pudding for lunch, especially when a milk soup or a rich rice and curry dish is served.

Wash the dried fruit carefully in cold water, then cover with cold water and allow to soak for four hours or over night,

if it is cold weather, as this improves the flavour. The fruit absorbs the water making it juicy and tender. Put on to cook in the same water in which it has been soaking, adding very little, if necessary. Bring to boil over a slow fire. Now allow fruit to simmer until tender, add sugar, if necessary, and boil for five more minutes. Serve cold.

Apricots require four tablespoons sugar to the pound of fruit.

Peaches require three tablespoons sugar to the pound of fruit.

Pears require one tablespoon sugar to the pound of fruit.

Acid prunes require two tablespoons of sugar to the pound.

The sweet variety of prunes require no sugar.

Do not use more sugar in the fruits than absolutely necessary, as sugar is often the cause of fermentation and indigestion. The above amount may even be more than you require. If you can take honey, sweeten your fruits with it in place of sugar, it is more easily taken care of in the digestive organs.

Prune Puree.

Wash one pound of prunes and put them to soak for four hours in sufficient cold water to cover. Cook in the same water for one or two hours over a slow fire or until prunes are quite soft. Cool and remove the stones. Rub the prunes through a colander and add the small quantity of rich juice left over from boiling. Serve cold with cream or as an addition to rice or other puddings.

Prune Fluff.

2 Cups prune puree.
2 Egg whites beaten stiff with pinch of salt.
2 Teaspoons sugar.
¼ Teaspoon vanilla.

Fold the beaten egg white and the sugar into the prune puree and add the vanilla. Serve cold.

VEGETABLE GELATINE.

(Agar-Agar or Japanese Seaweed).

Agar-agar is a seaweed found in Japan and India. It is of a gelatinous substance, contains no nutritive value, but serves as a body in holding food together as in fruit desserts, salad moulds and jellied vegetable entrees. It is much to be preferred to animal gelatine. One ounce of gelatine will solidify twelve cups of liquid, including the water in which it is cooked. This will mean four cups of cooked vegetable gelatine to eight cups of liquid.

Vegetable gelatine hardens quickly in ordinary room temperature. When a firm jelly to be turned out of the mould is desired, use two cups of liquid, such as fruit juices, vegetable broth, etc., to one cup of cooked vegetable gelatine.

Soak one half ounce of gelatine in warm water for thirty minutes. Detain and add one pint of boiling water. Boil gently for ten minutes or until clear; strain through a cloth or fine strainer and keep hot until you add whatever liquid you wish to put with it. This makes two cups of clear, cooked vegetable gelatine.

Orange Jelly.

1½ Cups orange juice.	½ Cup sugar.
3 Tablespoons lemon juice.	1 Cup cooked vegetable
4 Tablespoons water.	gelatine.

Mix all the ingredients and add the hot vegetable gelatine. Stir until sugar is dissolved. Pour into moulds wet in cold water and allow to stand until firm.

Fruit Jelly.

2 Cups fruit juice.	1 Cup sugar.
¼ Cup lemon juice.	1½ Cups cooked vegetable
	gelatine.

Two or three different kinds of juices may be used—grape, blackberry, pineapple, cherry, gooseberry, etc.

Dissolve the sugar in the fruit and lemon juice ; add the hot vegetable gelatine and pour into moulds first wet in cold water. Stand until firm and ready to serve.

Fruit Mould.

Prepare a lemon jelly. Slice plantains and line a fruit mould, pressing the fruit against sides and bottom of mould. To the lemon jelly preparation add a cupful of sliced plantains and one half cup of crushed English walnuts. Pour this into the fruit mould slowly. When firm and ready to serve turn into a dessert dish and serve with cream or custard. Other fruits and nuts may be used in a fruit mould.

Lemon Jelly.

1 Cup lemon juice.	1½ Cups sugar.
1 Cup water.	1¼ Cups cooked vegetable gelatine.

Mix well with the hot vegetable gelatine and pour into moulds wet into cold water. Set in a cool place to harden. Serve with cream and crushed nuts.

Vegetable moulds and jellies can be made by adding vegetable juices and bits of cooked vegetables, hard boiled eggs sliced. Allow to get cold and firm and turn out on platter. Serve with sliced tomatoes and crisp lettuce.

Tomato Jelly.

Is delicious served as a salad with fresh lettuce or celery and a dressing, if desired.

RICE DISHES.

Select the brown or natural rice, otherwise termed unpolished rice, for table use. The husk has been removed from this rice, but it retains the brown, gluten coat found just under the husk which contains the essential vitamins and mineral salts. Polished rice is a devitalised food, robbed of its life elements. Natural rice is an excellent food, and when combined with vegetables, curries, stews, fresh green salads, nuts, cheese or milk makes a most nourishing dish and may serve as the large part of a meal.

Rice seems more palatable when prepared so that each grain is flaky and tender, yet whole and separate. This is not always possible specially in preparing it with milk or as a pudding. When preparing a plain rice with milk, cook it in a steam boiler to prevent burning, and if it needs stirring do so by lifting the rice gently with a fork, not stirring or mixing with a spoon.

Browned Rice.

Clean, wash and dry with a clean cloth any quantity of natural rice desired. After it is thoroughly dry, put it in a pan and place in the oven, or over a slow fire, until each grain is an even, light golden brown. Stir at times to prevent burning. Cool, then put away in a covered tin ready for use.

To two cups of boiling, salted water add one cup of browned rice. Cook slowly until liquid is reduced down to one-third. Move to a very slow fire and steam for fifteen minutes, or better still is to cook the rice in a steam boiler. Be careful not to mash the flaky grains, but should it need stirring, lift the grains with a fork.

Plain Rice.

Try boiling rice that has not been browned, by the above method, and fifteen minutes before it is ready to be served, add one cup of hot whole milk, steam and serve as ordinary rice.

Plain Rice Pudding.

1 Cup rice.	3 Teaspoons sugar.
8 Cups milk.	¾ Teaspoon salt.

Clean and wash rice in several waters. Fresh whole milk from which the cream has not been removed is the best. Pour the milk into a deep baking dish or a *degchi*, add the rice and seasonings and place in a slow oven to bake fully two hours. Do not stir but allow each grain to be whole yet creamy. If you do not have an oven put the rice and milk in the top part of a steam boiler and bring to a boil. Then set this into the lower boiler in which is boiling water, cover, put over a hot fire, and steam until all milk is absorbed and rice is soft and creamy. Brown the top and serve either hot or cold. A flavour such as cardamom or cinnamon may be added. This pudding is delicious served cold with prune fluff or stewed fruits.

Cocoanut Rice Pudding.

1 Cup rice.	1 Tablespoon sugar.
1 Large cocoanut.	½ Teaspoon salt.

5 Cups warm water.

Scrape the cocoanut, add one cup of the warm water and allow it to stand for three minutes. Press out all the milk possible and strain. Stand this cocoanut milk aside and add four cups of warm water to the same cocoanut shreds, allowing it to stand twenty minutes. Press out this milk and strain.

Pick over the rice and wash thoroughly, add the last four cups of cocoanut milk, the sugar and salt and bring to a boil. Cook for ten minutes, cover and set it over a very slow fire to steam until each grain is tender, yet whole and quite dry. Add the first cup of cocoanut milk, steam five minutes longer and serve. This pudding is delicious served, either hot or cold, with stewed fruits such as prunes, guavas or sultanas.

School Boys' Rice Dish.

3 Cups milk.	1 Tablespoon sugar.
½ Cup rice.	½ Teaspoon salt.
½ Cup water.	1 Cup sultanas.

½ Tablespoon corn-flour.

Wash the rice thoroughly. Put it into the top part of the boiler, add the water and salt and bring to a boil, cooking for ten minutes. Add the milk and sugar, bring to a boil, then set this into the lower part of the steam boiler over a hot fire and steam for an hour, until rice is beautifully flaky and milk absorbed.

While the rice is cooking wash the sultanas and put on to cook in one cup of warm water. Cook slowly for fifteen minutes, add one teaspoonful sugar. Blend the corn-flour in a very little water, stir this into the sultanas, also a tiny sprinkle of cinnamon, and cook slowly for fifteen minutes.

When rice is cooked turn into a dish to cool. Pour around the rice the stewed sultanas, cool, sprinkle the top generously with crushed nuts and serve. Allow a spoonful of cream over each serving. A generous helping of this rice with two or three sandwiches made from home-made entire wheat bread, peanut, butter and fresh lettuce, also a glass of milk, is an excellent lunch for a growing school child.

Rice Apple Dish.

4 Tablespoons rice.	4 Apples.
2 Cups milk.	½ Cup sugar.
⅓ Teaspoon salt.	½ Cup water.

Cook the rice until tender in a double boiler with the milk. Salt. Peel and core the apples and cut in halves crosswise. Cook until tender, but not in pieces, in the syrup made by boiling the sugar and water together for two minutes. Put rice

and apples alternately in a serving dish, having the apples on the top. Pour the syrup that is left over the apples and fill cavities of the apples with guava jelly. Sprinkle sliced Brazil nut meats over the top. Serve with cream or with almond nut cream. This is an appetising dish for lunch. Peaches, guavas or pears are delicious in place of the apples.

Rice Souffle.

1 Cup cooked rice.
1 Cup milk.
3 Eggs.
4 Tablespoons grated cheese.
1½ Tablespoons flour.
½ Teaspoon salt.

Blend the flour with a little of the cold milk, gradually add this to the remainder of the milk that had been brought to a boil. Stir carefully into a smooth paste, cook for five minutes and add the grated cheese. Bring to a boil and remove from fire while the beaten yolks of eggs are added slowly. Now add the rice. Add the salt to the white of eggs and beat until stiff and dry. Fold the beaten whites into the hot mixture but do not stir. Pour this into a buttered baking dish, set into a pan of hot water and bake in a hot oven for twenty minutes or until firm. Brown the top and serve at once.

Rice Nut Balls No. 1.

2 Cups cooked browned rice.
½ Cup crushed peanut meats.
1½ Teaspoons grated onion.
1 Tablespoon peanut butter.
1 Egg.
2 Tablespoons milk.
1 Teaspoon Salt.

Mix the peanut butter with the milk; when smooth add the beaten egg, onion and salt; pour this over the rice and crushed peanuts. Form into balls and roll in bread crumbs. Place balls in an oiled baking pan and brown in a hot oven. Serve with white sauce in which a little peanut butter has been added.

Rice Nut Balls No. 2.

To one cup of crushed English walnut meats add two cups of cooked rice and one cup mashed carrots, season with minced green parsley and a little salt. Mix altogether with two eggs and two tablespoons milk and make into balls; roll in bread crumbs and brown in a hot oven or in very little fat in a hot frying pan. Serve with tomato sauce.

Peanut Sauce.

Cook four tomatoes in one half cup of water, strain and rub the pulp through as well. If not enough to make one and one half cup of strained tomato add sufficient water. Gradually add the tomato to one tablespoon peanut butter, stirring until smooth. Thicken with one tablespoon browned flour, bring to a boil and cook for three minutes. Add one tablespoon crushed peanut meat and one tablespoon minced green parsley before removing from the fire.

MILK PREPARATIONS.

Milk as a food is more nearly complete than any other, hence the best ways of using it in the diet is of great importance. Milk contains a goodly amount of protein, also the vitamins, and many of the mineral salts, making it a valuable food all through life. Children should not go without milk as the calcium and vitamins are so necessary to their growth.

As soon as milk enters the stomach it curdles due to the action of the gastric juice. These curds are large and more or less solid, specially is this true if milk is taken in its raw state. The ease of milk digestion depends upon the size and solidity of these curds. That "heavy feeling" so soften complained of after drinking raw milk, is due to it being raw and to drinking it too quickly, thus pouring it into the stomach in large quantities and forming tough curds difficult of digestion. Drink milk slowly.

Sterilised milk forms small, soft curds, easily digested and leaves the stomach in a shorter time, hence the advantage of milk brought to a boil compared to raw milk. Not only is it more easily digested, but germs are destroyed, and a cleaner and more wholesome food is the result.

Fresh milk that is quickly brought to a boil, removed from the hot fire at once and immediately covered and set over a kettle of boiling water for fifteen minutes, the water continuing to boil, is sterilised—free from dangerous germs. Set the kettle containing the milk into cold water, changing waters until milk is cool. Stand in a cold place where dust and flies cannot get into it.

Milk, either sterilised or pasteurised, is not to a great extent deprived of its vitamins, but the milk must be quickly brought to a boil and sterilised, not allowed to simmer slowly or vitamins are fully destroyed. The deficiency of vitamins can be replaced

in value by adding to the daily milk ration such fresh fruits as oranges, sweet limes, pumalo or grape fruit, also fresh tomatoes. The leafy vegetables, as celery, lettuce, fresh cabbage, spinach, water cress made into vegetable soups may also be used to advantage, but the fresh fruits are better.

Even acid fruits can generally be eaten with milk, if the fruit or fruit juice is taken first, and the milk sipped very slowly a few minutes later. Fruit acid combined with raw milk forms softer curds than raw milk taken by itself.

If milk is not digested easily as a liquid use it in some other form as clabber milk—doe, yogurt, cream cheese, milk custard, rice pudding, etc. However, milk puddings at their very best cannot take the place of a big glass of plain milk taken slowly by itself or eaten with a piece of real hard toast. Warm milk is more easily digested than cold milk.

Pasteurised Milk.

The following articles are necessary for the pasteurisation of milk : Pail or deep *degchi*, a wire rack, or a perforated tin with a narrow edge turned up, and a dairy thermometer.

Place the rack or the inverted, perforated tin in the *degchi*. Arrange the bottles of milk on the rack or tin. The bottles should be of uniform size and height, and if the milk is to be used for baby's feedings for the day, purchase bottles that will hold one feeding, so that the other bottles need not be opened and milk disturbed until needed.

Be certain that the bottles and stoppers are clean, having been washed in soap and water and rinsed in boiling water, before the milk is poured into them. Do not fill the bottle full but leave at least one inch from the top. Put a stopper in each bottle. Make an opening in one of the caps or stoppers, large enough to insert the thermometer. Surround the bottles with

cold water, filling the *degchi* sufficiently full that the water in *degchi* will be as high as the milk in the bottles, but not to the top of the bottle and stopper.

Place the *degchi* containing the water and bottles over the fire and bring quickly to a temperature of 145° to 150° F., as is indicated by the thermometer within the one bottle of milk. Allow this temperature to be maintained for five minutes, then remove the bottles from the water to a table away from a current of air. Cover with a towel and allow them to stand for twenty minutes. Gradually cook the bottles by placing in tepid water, slowly replacing with cold water until milk is cold. Set on ice or in a cold place, and do not remove the caps or stoppers until the milk is needed.

Cream Cheese Or Thick *Dahi* From Which The Water Is Removed.

Cream cheese is an excellent protein food and does not easily favour intestinal putrefaction. It may be eaten plain or mixed with various combinations, such as fresh tomatoes, fruits, crisp lettuce leaves, celery, fresh cabbage, water cress or sweet green peppers. Very dainty is the combination of cottage cheese with bits of fresh fruits, or even stewed fruits, served on crisp lettuce and the top sprinkled generously with crushed nuts or sultanas. If a generous portion of the cheese, mixed with a little cream—that is two heaping tablespoons cheese for each person—is used as a salad it may serve as the main protein dish of the meal.

To Prepare Cream Cheese.

Heat the sour milk or *dahi* almost to boiling over a very slow fire until the whey or water rises to the top. If the milk is allowed to boil the curds get very hard. Cool and pour off the whey, and empty the curd into a loosely woven cloth bag allowing it to drip without squeezing. Turn the curd into a dish and rub

smooth with a little cream or evaporated milk, add salt to taste and serve. Do not allow sour milk to stand long after it begins to sour, otherwise the curd will taste bitter. Fresh milk can be curded quickly by adding one cup of good sour milk to a quart—four cups—of the lukewarm fresh milk, and allowing it to stand in a warm, not hot place for an hour, then put over a slow fire until all is curdled. Proceed to make the regular cream cheese as above. A little lime juice added to warm milk curds it quickly and is ready to be prepared for cream cheese at once. When weather is hot it is necessary to make the cream cheese out of the fresh milk as that which stands to sour and gets thick is often bitter and smells badly and is not good for food.

Yogurt.

Milk curdled by the use of Yogurt Tablets contains the Bacillus Bulgaricus—an antagonist to the germs of putrefaction. These tablets can be bought at the chemists.

In the preparation of yogurt, first be certain that the jar in which the yogurt is to be made, also any other utensils used in mixing the milk, are perfectly clean. That is, washed in soap and water and scalded with boiling water.

To make the "starter" for the yogurt, heat a cup of fresh milk to boiling point, then cool until lukewarm. Dissolve the yogurt tablets in this milk, mix well, cover and keep in a warm place until the milk thickens. This takes about twelve hours. Cool the thickened milk and set it aside in a cold place for another twelve hours and the starter is ready.

Now sterilise or pasteurise one quart—four large cups of fresh milk and allow it to cool to a lukewarm. Add one half of the cup of starter; first beating the starter to make it smooth. Mix well and pour into the clear jar, cover with a thin cloth and set aside until the milk is thick, which takes about six hours in warm weather, longer in cold weather. Stir up this yogurt well

and serve with a little cream, if desired. The remainder of the first starter is not good to drink and need not be saved, but reserve half a cup of the fresh thick yogurt each day to be used as a starter for the fresh milk you wish to make into yogurt the next day. Yogurt should be made fresh each day or it gets acid. Add less starter as the yogurt goes on if it seems very acid.

Junket.

Milk curdled by the use of the Junket Tablet or a Pepsin Preparation is easily digested and more conveniently taken care of by sick than is ordinary fresh milk.

How To Prepare Junket.

2 Cups of fresh milk.
1 Junket Tablet or one teaspoon "Pepsin Cordial".
1 Teaspoon cold water.

Crush and dissolve the tablet in the cold water. Bring the milk to the boiling point, and cook quickly for two minutes. Cool to lukewarm. Add the dissolved tablet and mix, and stand in a warm place until thick. A little vanilla flavour or powdered cinnamon may be added to taste. Serve cold.

THE FEEDING OF CHILDREN.

Careful feeding in childhood lays the foundation for good health in later years. Much can thus be accomplished during the developing years to obtain good results, not only in building physical structure, but in character building—a higher intellectual, moral and spiritual attainment.

Children who have been taught to form the habit of eating wholesome foods at regular hours are learning lessons in self-discipline, as well as laying a physical basis which will protect them from being subject to every disease germ that comes their way.

By all means begin the young infant on mother's milk, but if it must be fed artificially, the greatest care is necessary in the selection and preparation of the food. Powdered cow's milk is more easily digested by infants than is condensed milk. When fresh cow's milk is used it should be sterilised or pasteurised, as it is more easily digested than in its raw state; and too raw milk may introduce harmful germs into the digestive tracts causing more or less bowel disorders.

As a precaution against nutritional disturbances, such as rickets, eczema and scurvy, when feeding sterilised milk introduce orange juice into the diet. If oranges are not obtainable, the juice of sweet lime or boiled tomato can be used with much the same benefit. One ounce of fresh juice daily is necessary to make up the loss sustained through sterilising the milk. Give this amount in three portions daily, first diluting with a little cool boiled water. The juice should not be given during the feeding of the milk, but three-quarters of an hour before the feeding is due. An infant of one month can begin to take a teaspoon of orange juice daily. Increase the amount as he grows older.

When a child is about a year old, include, with his milk diet, vegetable soups strained, yolk of egg beaten up in a little milk, a bit of hard toast; also well-cooked porridge as Granose, *soojie*, *dalya* and oatmeal well strained.

Milk is an important food all through the growing period. Four cups a day is not too much for a child, but if this amount is not available, supplement with soups, rich in vitamins, made from fresh green leaf vegetables, as well as the mature vegetables. Wash the vegetables thoroughly, allowing the skin of carrot and potato to remain on. Add a red onion and a leafy vegetable as celery tops or young carrot tops, or best root tops, or fresh green peas with pods and a tomato and very little water. Cook over a moderate fire for one hour, strain, add a spoonful of thin cream and you have a most delicious soup. Different vegetables may be combined for different flavoured soups, all excellent for growing children.

When serving a porridge dish with milk, do not make the mistake of adding sugar to encourage the child to eat it. If the child is old enough to use fruits, add a few sultanas or chopped dates to sweeten the porridge, or a little date puree or prune fluff is acceptable. Too much sugar is harmful at any time, and when eaten as sweets prepared with butter or *ghee*, may cause serious digestive disorders, and often favours catarrhal conditions, frequent colds and throat troubles.

To give the child the best opportunity for normal growth, supply the needs with nourishing foods, containing an ample amount of protein as the body demands are great during the growing period. By all means teach the child to eat slowly, chewing each mouthful thoroughly, not washing it down with water. Encourage water drinking between meals. These simple rules mean a stronger physical condition all through life. It takes patience and careful training from infancy, but great is the reward to both mother and child.

GRANOSE BISCUITS.

Granose Biscuit is a cereal food containing the whole grains of wheat that has been steamed, rolled into flakes, pressed into cakes and baked to a crisp brown. It is a most wholesome food containing all the wheat elements and takes the place of bread, especially when yeast bread interferes with digestion. Granose Biscuit keeps for a long time in a dry, cool place.

Granose Biscuit with Milk and Cream.

Slice and toast the Biscuit and serve as a breakfast food with either hot milk or thin cold cream.

Always slice and toast Granose Biscuits before using so as to return them to their fresh crispness and delicious flavour.

Granose Biscuit with Eggs.

Poach two eggs in boiling water and dish out on a Granose Biscuit that has been sliced, toasted and buttered. Salt and serve hot.

Granose Biscuit with Scrambled Eggs.

To two eggs add one teaspoon cream, a little salt and mix. Pour into a hot frying pan (slightly buttered) and in a moment stir the eggs from the bottom. Remove the custard, creamy eggs from the fire and place on a hot, buttered Granose Biscuit. Grate over all some fresh cheese. Garnish with fresh lettuce and serve hot for either breakfast or lunch dish.

Granose Biscuit with Tomato.

Pour boiling water over the desired number of tomatoes, slip off the skins and put tomatoes into a saucepan whole. Stew or bake slowly for 20 minutes, without mashing the tomatoes. Add salt and sugar to taste and a little butter; also a little Marmite, if desired. Dish up two tomatoes on each sliced and toasted Granose Biscuit. Pour a little of the tomato juice over

the top. Serve hot as a breakfast or lunch dish with fresh lettuce or celery. Tomatoes may be fried and served on the Granose.

Granose Fruit Layer.

Clean and thoroughly wash one cupful of large yellow raisins, put on to cook in a cupful of boiling water for twenty minutes. Stir one teaspoonful of corn-flour blended with a tablespoonful of cold water, into the boiling raisins, boil for five minutes, add three drops of vanilla essence and remove the raisins from the fire. Slice and toast four Granose Biscuits. When nicely browned and hot throughout, butter each piece, reserve four halves, and serve the other four on individual dishes. Dip out some of the raisins on these, put the other half Granose Biscuits on top, and a few more raisins on the top of these. Pour some of the thickened juice over the biscuits and serve either as a breakfast dish with a little cream or milk, or as a lunch pudding. Any stewed fruit may be served with Granose Biscuit.

Granose Biscuit Pudding.

Toast the desired number of Granose Biscuits and lay them on the bottom of a glass pudding dish. Slice a thick layer of plantains over the Granose and sprinkle a little sugar over this. Pour over all a sufficient amount of sweetened orange juice to cover the pudding as it takes a good amount to moisten the Granose flakes. Allow it to stand a few minutes, and just before serving, sprinkle crushed nuts over the top.

This pudding is delicious served with a custard dressing or cream, in that case you may not want the nuts.

Other fresh fruits, as pineapple, guavas and peaches sliced and sprinkled with powdered sugar are delicious served as a pudding with Granose Biscuits sliced and toasted and served with custard sauce, whipped cream or fruit juices sweetened a little and almond nut cream is very nice too.

Granose Prune Pudding.

In the centre of each slice of toasted Granose Biscuit pour one tablespoonful of thick prune juice, heap on this two tablespoonsful of thick prune puree, and on the top of the puree a dessertspoonful of whipped cream. Serve with a big glassful of milk and a half dozen leaves of fresh lettuce as a full lunch when one partakes of a big dinner at night.

FRUIT PUNCHES FOR TEAS.

Foundation Recipe for Punches.

½ Cup lemon juice.
1½ Cups orange juice.
Grated rind of half an orange.
1 Tablespoon grated lemon rind.
¾ Cup sugar.
4 Cups water.

Cook the sugar and water for five minutes, cool and add the other ingredients. Strain and serve cold.

Pineapple Punch.

1 Cup grated pineapple (fresh or tinned).
⅓ Cup sugar.
1 Bottle soda water.

Add these to the foundation recipe and serve very cold.

Peach Punch.

1½ Cups peaches cut fine (fresh or tinned).
⅓ Cup sugar.

Add these to the foundation recipe and serve very cold.

Grape Punch.

3 Cups grape juice (Welches)
1 Bottle soda water.
½ Cup sugar.

Add these to the foundation recipe and serve very cold.

Lemon Punch.

¾ Cup lemon juice (lemon or lime).
¾ Cup sugar.
1 Bottle soda water.
1 Spray fresh mint finely minced.

Add these to the foundation recipe and serve very cold.

Fresh or tinned whole berries, such as red cherries, raspberries or strawberries; also crushed fresh fruits as apricots, loquats or mangoes may be used with the foundation recipe, thus making a large variety of delicious drinks; the juices of these fruits to be used as well as the fruits themselves. Sugar as required. Serve cold. Do not add soda water until ready to serve.

A big glass of fresh fruit punch served with Golden Cake at tea time is delicious, and certainly more wholesome than the usual cup of tea.

Pumelo is an excellent fruit for punch. When oranges are plentiful use a glass of orange juice a day, taking it at tea time or half an hour before breakfast in place of the chota-hazeri.

Mango Fool.

Stew green mangoes, when done, strain and add one-third as much sugar as mango pulp. Bring to a boil and cook five minutes. When cold add cold, fresh, whole milk enough to make the drink about as thick as beaten up thick sour milk. Stir all the time you are adding the milk so as to form the fine curds. Serve cold.

Stewed apricots or peaches can be used as a drink with milk made the same as Mango Fool.

Golden Cake.

6 Eggs.
1 Cup sugar, sifted four times
1 Cup flour (pastry or cake flour) measured after sifting four times.
½ Teaspoon cream of tartar or baking powder.
½ Teaspoon salt.
1 Teaspoon vanilla.

Separate yolks from whites of eggs. Beat the yolks with a rotary egg beater or fork until stiff and airy. When almost finished add the salt and beat again for three minutes.

Next add the cream of tartar to the whites of eggs and beat until stiff and dry; use a rotary egg beater if you have one. Add the sugar to the beaten whites and fold in carefully with a large fork, or better still a wire spoon egg whip; now fold in the beaten yolks, adding the vanilla. Next fold in the flour carefully. Do not stir or beat.

Pour the cake mixture into a deep square cake pan not oiled. Bake in a very slow oven for one hour and when cake is baked invert the pan and stand until cold.

CURRIES.

Kofta Curry.

2 Tablespoons rice.
2 Tablespoons *dal*.
1 Cup crushed walnuts.
1 Large onion.
2 Eggs.
½ Teaspoon salt.
½ Cup water.
3 Small ripe tomatoes.
2 Tablespoons *ghee*.
1 Teaspoon chopped fresh celery, sage or parsley.

Cook rice and *dal* together in one cup of hot water until dry and tender. Grate half the onion and mix with the cooked *dal* and rice. Add the crushed nuts, eggs, salt and fresh celery and sufficient toasted bread crumbs to allow this mixture to be made into balls about the size of a large walnut. Brown the balls in one tablespoon hot *ghee*, turning carefully to brown evenly. Pour over the balls the hot curry sauce and serve with rice.

Curry Sauce.

Brown half the onion finely sliced in the hot *ghee*. Remove from the fat. Brown one teaspoon coriander, ½ teaspoon cummin and one two-inch piece of saffron dry, over the fire. Grind these with one section of garlic and one piece of copra. Put all into the hot *ghee* and brown. Add the peeled tomatoes and half a cup of water. Cook for fifteen minutes and serve.

Fresh cocoanut may be used in place of the dried. Draw the milk from the fresh shredded cocoanut by pouring over it one cup of warm water and allow to stand 10 minutes and squeeze out the milk. Add this to the curry gravy just before removing from the fire, in place of the half cup of water.

Macaroni and Egg Curry.

- 1 Cup macaroni broken in inch lengths.
- 4 Eggs.
- 2 Large tomatoes.
- 1 Large onion.
- 2 Tablespoons *ghee*.
- 1 Teaspoon turmeric (when ground).
- 1 Teaspoon coriander seed.
- ½ Teaspoon cummin seed.

Boil the macaroni until tender and drain. Hard boil the eggs. Brown the coriander and cummin seeds in a pan without *ghee*. Grind. Brown the sliced onion in the *ghee*. Remove from the fat, add the ground curry ingredients to the *ghee* and brown. To this add the macaroni, brown and add the peeled tomatoes, sliced, and cook for ten minutes. Cut the hard-boiled eggs in halves, add to the curry, salt and serve.

Palao.

- ¾ Lb. rice.
- 1 Onion.
- 2 Dozen almonds.
- 4 Dozen sultanas.
- 4 Cloves.
- 2 Cardamoms.
- 3 Inches stick cinnamon.
- 2 Tablespoons *ghee*.

Shell the almonds and remove the brown skins by pouring boiling water over them; stand for three minutes, remove from the water and slip off the skins. Wash and dry the sultanas. Slice the almonds and brown them with the sultanas for two minutes in the hot *ghee*. Remove from the fat. Brown the thinly sliced onion in the hot *ghee*, stirring until it is a light, golden brown. Add sufficient water to cook the rice nicely without burning, yet not at all watery. When half cooked add the cloves, the ground cinnamon and the cardamom. Before removing from the fire add the sultanas and almonds. Sprinkle the top with the browned onions and serve.

Green Pumpkin and Cocoanut-milk Curry.

½ Seer green pumpkin.	2 Sections garlic.
1 Cocoanut.	2 Tablespoons *ghee*.
1 Onion.	2 Bay leaves.

Cut pumpkins in inch squares. Slice the onion and brown in the *ghee*, then remove from the fat and set aside. Into the hot *ghee* put the pumpkin, the sliced garlic and bay leaves, cover the *degchi* with a lid, stir occasionally, allowing the water from the pumpkin to be absorbed. When the vegetables are dry they will be golden brown. Now put in a teaspoonful of sugar, salt, a little ground cinnamon and cardamom. Shred the cocoanut and pour over it a half cup of warm water, stand for a few minutes, then squeeze out the milk, again put over the same cocoanut another half cup of water and squeeze out the remainder of the cocoanut milk. Add all the milk to the pumpkin, bring to a boil and serve with the browned onion sprinkled on top of the curry. Red pumpkin may be used.

Vegetable Curry.

Take small potatoes, cauliflower and green peas—the amount required. Slice and brown one large onion in two tablespoons *ghee*, remove onions from the fat and into this hot fat put the *masala* of ground copra, turmeric, garlic, coriander and cummin seeds and two bay leaves. Brown the vegetables in the *masala* and *ghee*, then add sufficient water to cook them without burning. When vegetables are almost done, add ripe tomatoes. Salt to taste. Sprinkle the top with the browned onion.

A variety of vegetable curries can be made by combining the different kinds of vegetables.

Savoury Macaroni with Cocoanut.

1 Fresh cocoanut.
10 Long sticks macaroni.
2 Large ripe tomatoes.
1 Tablespoon flour.

Scrape cocoanut, pour over it one cup warm water (not hot), press and strain. Pour three cups warm water over the same cocoanut, press well and strain. To this add the macaroni broken in pieces and boil until tender ; add the tomatoes peeled. Boil five minutes, then thicken with the flour. Salt to taste. Add the first cup of cocoanut milk just before serving.

When desired as a cold dish turn into a mould, first rinsed with cold water, stand until cold and turn out on a dish.

BREADS.

The best entire wheat flour is made from the hard wheat grown in the northern districts of India, and makes the best entire wheat bread. Only the outer husk is removed from the grain before grinding into flour. Such a wheat flour contains all the gluten, the rich proteins and oils, vitamins, mineral salts, starches, also the laxative qualities included in the bran—the outer covering of the grain.

Wheat is rich in gluten and this gluten is necessary to make leavened or yeast bread. Gluten when moistened and kneaded becomes so tenacious that it confines the gas formed in the dough by the yeast making the bread light and porous. The flour should be ground fairly fine in order to prevent the gas formed in the dough from escaping, otherwise the bread will not be sufficiently light, but heavy in appearance.

The entire wheat flour dough should not be allowed to rise until too light—and it rises more quickly than white dough—as it becomes coarse grained and loses its delicious flavour through too long fermentation. This also applies to the loaf when moulded and put into the pan to rise. When the loaves are made, mould them lightly in the hand, not on the board.

When using entire wheat flour for the dough it should be made soft, so soft in fact, that it is somewhat difficult to knead on the bread board.

Ata bread should be baked in a hot oven. Do not set the sponge for *ata* bread before nine or ten o'clock at night and make into dough in the early morning, in fact in hot weather the sponge is ready to make into dough by five in the morning. If sponge is left to rise too long it sours, and a sour bread is the result. All water may be used in bread making in place of milk. In fact, on the hot plains, it is better to use water instead of milk.

Ata or Entire Wheat Bread.

Sponge :

2 cups (1 lb.) white flour.
1½ cups (15 oz.) cold water.
1 cup (10 oz.) fermented sponge.

One cupful of fresh potato yeast or two small yeast cakes can be used in place of fermented sponge.

Sift the flour into a large bowl or *degchi*; add the water and beat briskly for three minutes or until batter is perfectly smooth. Add the yeast or fermented sponge; beat again for a minute. Cover and wrap up in something warm and set aside to rise overnight. In the early morning the sponge is light and full of air bubbles throughout.

Dough :

Add to the sponge four teaspoons salt and one tablespoon sugar; two cups (1 lb. 4 oz.) fresh milk, boiled and cooled to lukewarm (water may be used in place of milk).

Sift 2½ cups (1 lb. 4 oz.) of *ata*. Add one cup to the sponge and beat with a large spoon until smooth. Now add most of the remainder, mix and turn out on a board or large platter that has been generously sprinkled with *ata*.

Knead by turning part of the dough over and over on to itself, just as you would make the dough for nice, light *chapatis*. Knead from ten to fifteen minutes until dough is smooth and soft. *Ata* differs in gluten so it is well to add it slowly to the sponge as you may not need the full amount. The dough should be *soft*, for, if stiff, it makes a dry, hard loaf when baked.

Ata Cream Sticks.

Use one cup of cream and one half cup of milk. Add a teaspoon of salt and gradually sift into this enough *ata* to make a dough that can be easily kneaded on the bread

board. Knead for five minutes and cut into strips. Make each roll three inches in length and two-thirds inch in thickness. Bake in a fairly hot oven. The rolls when baked should be crisp and nicely browned. Delicious for teas and also a good unleavened bread for one who is unable to digest the yeast bread.

Nut and Raisin Bread.

To make nut and raisin bread add a large cup of seeded raisins and a large cup of crushed English Walnuts (be careful that nuts are fresh) to the dough while kneading it. Allow the dough to raise and put into pans. Raise again and bake in a moderately hot oven.

White Bread.

White bread is made the same as *ata* bread, but white flour is used in making the dough instead of *ata*.

Coffee Cake with White Bread Dough.

After the white bread dough has risen to almost double its bulk, that is just before it is ready to go into the baking tins, cream together three tablespoons of butter, three tablespoons of sugar and one egg, until soft and smooth.

Take half the bread dough (putting the other half into tins for ordinary bread), add the creamed mixture, folding together thoroughly, adding enough flour to make a *soft* dough. Let this rise until light. Roll out lightly on a board to one-half inch in thickness. Place flat on an oiled tin, brush with melted butter and sprinkle with sugar and cinnamon. Let rise until doubled in thickness and bake in a hot oven about twenty minutes.

Serve with hot milk, cocoa or wheat coffee for breakfast or for afternoon tea.

Cinnamon Rolls.

Take half the white bread dough after it has risen the first time to double its bulk. Roll out into a long thin piece—one-half inch in thickness. Sprinkle with sugar and cinnamon. Roll together as for a jelly roll and cut into one inch widths, place close together on an oiled tin and let rise until double in size. Butter the top, sprinkle with sugar and cinnamon and bake in a hot oven for twenty minutes.

Yeast for Bread-making.

2 potatoes (medium size)	1 tablespoon sugar.
2 teaspoons hops	½ teaspoon salt.

Tie the hops into a small piece of coarse cotton cloth. Wash, peel and slice the potatoes and put on to boil with the hops in enough boiling water to cover well. When the potatoes are cooked, squeeze the liquid from the bag of hops and remove the bag. Mash the potatoes until smooth, add the sugar and salt, mixing thoroughly, then add one cup (10 ozs.) of the self-working yeast. A dry yeast cake that has been softened in a little warm water is as good as the self-working yeast. Pour this mixture into a clean jar that has been scalded with boiling water. Do not cover until mixture is cold. Allow this to stand for several hours forming tiny air bubbles all through the mixture before it is ripe enough to use as yeast in bread-making. Save a cup of this yeast to use as a starter in making the next yeast and continue to reserve a cupful from each fresh quantity of yeast for new bread that is to be made.

It is not necessary to make one's own yeast as fresh yeast can be purchased from **17, Abbott Road, Lucknow.** These are hard yeast cakes and need to be soaked in warm water before using. Each cake soaked in one-half cup of warm water will raise a dough sufficient to make two small loaves of bread.

If the weather is cool enough, or even in hot weather when the full bread-making is done in the day and the sponge not set overnight, a cut of light sponge may be taken out of the bread sponge that is ready to make into dough, and kept as a starter for the next baking, thus avoiding making new yeast each time or using the yeast cake.

Self-working Yeast.

2 potatoes (large size)
½ oz. hops
4 cups or 2½ lbs. cold water.
1 cup or 8 oz. white flour.
½ up or 2 oz. white sugar.
1¼ teaspoon salt.

Tie the hops in a coarse cotton cloth and boil one hour in the water. Allow this to cool until lukewarm ; squeeze the liquid from the bag of hops and remove the bag. Add this liquid to the sifted flour, stirring into a smooth batter ; add the sugar and salt. Now set it away for two days in an open jar covered only with a piece of clean cloth. Keep in a moderately warm place.

On the third day peel, slice and boil the potatoes in just enough boiling water to cover. When cooked, mash the potatoes thoroughly and add to the flour batter that was made two days previously ; mixing well. Allow this to stand for twelve hours in the open jar with only a clean cloth as a covering, stirring often and keeping it in a moderately warm place. Scald a clean jar with boiling water and turn the mixture from the first jar into the clean one. Cover well, and put away in a dark, cool place.

This is the yeast starter from which the first fresh yeast is made for the bread-making. This self-working yeast needs no "rising" or yeast to excite fermentation. If kept in cool place and jar covered it will keep for some time.

MENUS.

BREAKFASTS.

1. *Dalya* (crushed wheat), Porridge with Whole Milk.
Poached Eggs on Toasted Granose Biscuit.
Stewed Figs. Fresh Fruit.

Hot Milk.

2. Browned Rice with Whole Milk or Thin Cream.
Eggs and Cheese on Toast.
Stewed Gooseberries. Fresh Fruit.

Hot Cocoa made with Milk.

3. Browned Oatmeal with Whole Milk.
Scrambled Eggs. Baked Potatoes.
Fresh Fruit. Yogurt.

4. Orange Juice.

Rice with Raisins and Cream.

Jellied Eggs.

Hot Milk with Postum Brown Bread.

5. Toasted Granose Biscuit with Whole Milk.

Baked Eggs in Tomato Juice.
Stewed Apples Fresh Fruit.

6. Rice and *Dal.*

Stewed Guavas Brown Bread and Butter.

Whole Milk.

7. Browned Soojee with Dates and Whole Milk.
Baked Potatoes. Savoury *Dal.*
Papita. Wheat Coffee.

LUNCHEONS.

1. Kofta Curry and Rice.
Chapati. Fresh Lettuce.
Lemon Jelly.

2. **Tomato Soup.**

Creamed Eggs and Cheese. Mashed Potatoes.
Brown Bread and Water Cress.
Fresh Fruit.

3. **Green Peas Loaf No. 2.**

Browned Carrots. Tiny Fresh Onions.
Mango Fool.
Stuffed Dates. Brown Bread.

4. **Peas Soup.**

Rice Pudding served with Prune Puree.
Brown Bread and Almond Nut Butter with Lettuce.

5. Palâo with Egg Curry.
Fresh Fruit Salad.
Celery and Brown Bread.

6. **Dal Soup.**

Fresh Tomato Salad. Mayonnaise Dressing.
Brown Bread and Peanut Butter.
Wheat Coffee and Hot Milk.

7. **Fruit Soup.**

Baked Rice with Apples or Baked Pears.
Cream Cheese on Crisp Lettuce.
Bread with Kashew Nut Butter.
(This Lunch is served cold).

DINNERS.

1. **Clear Tomato Soup.**

Punjab Nut-Loaf with Browned Onions.
Mashed Potatoes. Green Peas.
Cheese Savoury with Crisp Lettuce or Celery.
Orange Jelly with Cream.

2. **Potato and Onion Soup.**

Bean Loaf. Browned Potatoes.
Artichokes. Tomato with Cream Cheese.
Spinach on Toast.
Chocolate Pudding.

3. **Tomato-Marmite Soup.**

Dal and Rice Loaf. Baked Potatoes.
Tomatoes Baked. Baked Cabbage.
Cheese Souffle.
Caramel Fluff.

4. **Peas Soup.**

Baked Onions. Scalloped Potatoes.
Mashed Turnips.
Cream Cheese Salad with Fresh Tomato and Crisp Lettuce.
Savoury Macaroni.
Fruit. Jelly.

5. **Dal Soup.**

Rice Nut Balls No. 2. Green Peas.
Savoury Potatoes. Buttered Beets.
Fresh Celery.
Snow Pudding.
Nuts and Raisins.

6. **Clear Vegetable Soup.**

Protose Bake. Stuffed Potatoes.
French Beans. Cauliflower.
Fresh Tomato and Lettuce Salad.
Peach Tapioca Pudding.

7. **Cream Corn Soup.**

Simla Nut Loaf Sliced Cold.
Tomato Jelly.
Fruit Salad.
Prune Pudding with Rich Milk
or Cream.

All may be served cold in No. 7 Menu but the soup.

NEW BREAKFAST PORRIDGES.

Dalya or Crushed Wheat.

¾ Cup of *dalya*.	½ Teaspoon salt.
3 Cups boiling water.	15 Dates.

Add the *dalya* slowly to the boiling salted water, stir until thickened and remove to a very slow fire and cook for one-half hour.

Clean the dates, remove the stones and cut dates into halves. Five minutes before you are ready to serve the porridge, add the dates. Do not stir so as to make the date mushy. Serve with hot milk or very thin cream, or with almond milk.

A delicious breakfast dish, and specially good for school children. Small sultanas may be used in place of the dates.

To enhance the delicious flavour of this porridge, brown the *dalya* to a light golden brown before cooking, using almost half the amount of boiling water and cook for fifteen minutes only.

Rice with Raisins.

Prepare and cook rice as given for plain rice in rice recipes, adding one cup of milk fifteen minutes before it is ready to serve.

Wash raisins or sultanas in hot water and add them to the rice when it is almost tender. Serve with whole milk or thin cream.

When raisins are used do not add the cup of hot milk but use hot water instead.

Oatmeal.

Try, slightly browning the dry oatmeal before cooking. The browning adds a delicious flavour to this breakfast porridge. Another change in the regular oatmeal porridge is to

add dates or sultanas a few minutes before it is removed from the fire. Wash the fruit carefully in hot water before putting into the porridge. Remove the stones from dates.

Browned Rice.

As given under rice recipes.

Postum.

To make Postum nicely for either breakfast or tea use one teaspoon level full of the Postum and one-half breakfast cupful of boiling water, stir and fill the cup with boiling milk. A little less Postum is used for a tea-cupful.

Wheat Coffee.

Clean a seer of wheat kernels thoroughly, wash in several waters and rub dry between clean clothes. Crush the kernels in a mill, mix with the crushed wheat two tablespoonsful of brown sugar and put into shallow pans and gradually heat to a dark brown in a moderate oven, but be careful not to burn. Stir frequently so as to brown evenly. When browned, cool and put in a covered tin ready for use. To one tablespoonful of wheat use one cup of boiling water, cook for fifteen minutes, strain and serve with hot milk in place of coffee.

SEASONINGS, MASALAS AND SUNDRIES.

Nutmeg (*Jaipul*).
Cloves (*Lavung*).
Parsley (*Petercelle*).
Cinnamon (*Dal Cheenee*).
Cardamom (*Elaichee*).
Corriander Seed (*Dhania*).
Carraway Seed (*Jeerah*).
Turmeric, Saffron (*Huldee, Zaffran*).
Mint (*Pudeena*).
Onion (*Piyaz*).
Garlic (*Lahsoon*).
Bay Leaf (*Curripilay—tej pata*).
Water Cress (*Halee*).
Almonds (*Buddam*).
English Walnut (*Ukrot*).
Yeast (*Kumeer*).
Peanut, Monkey Nuts (*Cheena Baddam*).
Cream Cheese (*Malai Ka Paneer*).
Cooking pan—a *degchi*.
Baking pan—a small *degchi* may be used.

Baking dish—fireproof dishes (*casserolle*) that can be put in the oven and used in many ways.

Tin Baking dishes.
Enamel baking dishes.
Aluminium baking dishes.
Pyrex baking dishes.

TABLE OF MEASURES AND WEIGHTS.

4 Teaspoons	1 Tablespoon.
10 Tablespoons	1 Cup—Breakfast.
2 Breakfast cups	1 Pint.
20 ozs. milk or water	1 Pint.
1 Tablespoon liquid	½ Ounce.
1 Tablespoon butter	½ Ounce.
1 Tablespoon flour	¼ Ounce
1 Tablespoon sugar	½ Ounce.
1 Cup milk or water	10 Ounces.
1 Cup flour—white or *ata*	8 Ounces.
1 Cup butter	8 Ounces.
1 Cup sugar	8 Ounces.
1 Cup chopped vegetables	4-6 Ounces.
1 Cup grated cocoanut	4 Ounces.
1 Cup chopped nuts	5 Ounces.
1 Seer	2 lbs.
1 Powah	8 Ounces.
1 Chittack	2 Ounces.

All measures are level, neither rounding nor heaping. For the preparation of any one recipe use the same sized cups or spoons so as not to have one large cup of one ingredient and a small cup of another.

Tablespoons and teaspoons vary in size.

The Table of Food Values on page 153 enables one to ascertain the nutritive value of any food, expressed in calories of protein, fats, carbohydrates, and total food value contained in a usual serving. Thus, one-fourth ounce almonds contains 24·5 calories of protein, 146·4 of fats, 20·2 of carbohydrates and has a total food value of 191·1 calories. The figures before the name of the food gives the usual quantity of that particular food taken at a serving. This does not mean that only so much may be taken, but is so arranged as a matter of convenience for calculating the values, and enables one to gauge quite accurately, without reference to the table, the value of foods used as a regular article of diet.

TABLE OF FOOD VALUES.

Oz. in ordinary serving.	Protein.	Fats.	Carbohydrates.	Total.
½ Almonds	24·5	146·4	20·2	191·1
3½ Apples, Baked	·6	1·3	28·4	30·3
5½ Apples, Fresh	·5	1·3	16·6	18·4
6 Apple Juice ..	·0	·0	17·0	17·0
3½ Apple Sauce	·3	·8	20·65	21·78
2¾ Apple Tapioca	2·6	·66	36·0	39·3
3 Apricots	1·3	·0	15·6	16·9
3½ Apricot Sauce	1·2	·0	20·5	21·7
1¾ Asparagus (Cooked) ..	2·5	8·8	2·6	13·9
3 Asparagus in Cream ..	2·8	17·0	4·9	24·7
3½ Plantains	1·5	1·6	25·7	28·8
3½ Plantains (Baked) ..	3·2	4·73	32·37	40·3
6 Barley Gruel	1·5	·7	10·2	12·4
4¾ Bean Broth	4·3	3·2	11·6	19·1
3½ Beans, Baked	10·0	12·5	33·6	56·0
3½ Beans, Baked (Canned) ..	8·0	6·6	22·9	37·5
2½ Beans, Green Lima ..	4·7	·8	17·0	22·5
3 Beans, Hulless (Cooked) ..	8·3	·7	23·7	32·7
2½ Beans, Navy (Cooked) .	8·1	1·47	21·38	30·96
4 Beans, String (Cooked) ..	·9	2·9	2·2	6·0
4 Beans, Wax (Cooked) ..	1·2	·3	3·6	5·1
3 Beet Greens (Cooked) ..	2·6	9·1	3·7	15·4
2½ Beets (Cooked) ..	2·7	·3	8·6	11·6
2½ Biscuit, Cream ..	10·3	27·5	49·6	87·5
3 Blackberries	1·5	2·6	12·7	16·8
3 Blackberry Sauce ..	·8	3·3	29·1	33·3

Oz. in ordinary serving.	Protein.	Fats.	Carbohydrates.	Total.
3½ Blanc Mange, Chocolate ..	3·4	22·86	16·25	45·52
4¼ Bouillon Tomato ..	3·62	7·98	4·77	16·37
3 Bread Custard Pudding ..	8·75	46·08	67·24	122·07
2 Bread, Corn	8·5	12·3	52·0	72·8
2 Bread, White	9·3	3·7	63·4	76·4
2 Bread, Whole Wheat ..	11·3	2·4	58·0	71·7
4¾ Broth, Bean ..	4·39	3·16	11·58	19·13
4¾ Broth (Vegetable) ..	2·8	·0	·5	3·3
2¼ Brown Gravy	1·5	30·7	3·9	36·1
1½ Buns ..	7·3	17·3	66·8	91·4
6 Buttermilk	3·5	1·3	5·6	10·4
4 Cabbage, Boiled ..	·8	6·1	1·9	8·8
3½ Cabbage, Creamed ..	1·5	8·1	3·7	13·3
2 Cake, Frosted	6·8	24·0	74·9	105·7
3 Cake, Jelly Roll ..	5·8	9·4	85·2	100·4
1½ Cake, Sponge ..	12·4	14·2	94·2	120·8
3¾ Carrots, Creamed ..	2·01	7·5	10·3	19·8
3 Cauliflower, Steamed ..	1·0	6·2	·3	10·2
1 Celery ..	1·3	·3	3·9	5·5
2 Cheese, Cottage ..	19·9	12·4	5·1	37·3
2½ Cherries ..	1·2	2·2	19·5	22·8
3 Cherry Sauce ..	1·2	2·0	29·4	32·6
2 Cocoanuts	6·6	134·9	32·5	174·0
¾ Corn Flakes (Maize) ..	10·8	1·4	91·3	103·5
2¾ Corn, Green Sweet (Maize) (Cooked) ..	3·6	2·9	22·0	28·5
2½ Cream	2·9	49·3	5·3	57·5

Oz. in ordinary serving.	Protein.	Fats.	Carbohydrates.	Total.
2 Cucumbers	·9	·5	3·6	5·0
1 Currant Jelly	1·2	..	90·1	91·3
1½ Dates	2·5	7·5	91·5	101·5
3 Eggs Macaroni ..	5·45	20·7	9·34	35·5
1½ Egg Plant ..	6·63	26·43	37·9	71·0
1½ Eggs, Poached ..	16·3	32·0	..	48·3
2½ Eggs, Poached on Toast ..	14·1	18·28	25·36	57·76
2 Eggs, Scrambled ..	14·1	23·7	1·45	39·25
8 Eggnog, Milk ..	5·9	23·0	9·0	38·0
3 Endive	3·3	1·0	4·93	9·23
½ English Walnuts ..	19·4	169·2	18·2	206·8
2 Figs	·5	8·0	86·6	92·4
½ Filberts	18·2·	174·1	15·2	207·5
3 Floating Island ..	5·45	12·4	21·6	39·6
2½ Gooseberries, Stewed ..	·5		18·9	19·4
6 Gruel, Barley	1·48	·7	10·2	12·39
6 Gruel, Oatmeal ..	1·3	1·4	5·8	8·5
4½ Gruel, Potato Meal ..	1·0	·1	10·2	11·3
6 Gruel, Rice	·7	1·2	5·8	7·7
1½ Honey	·5		94·7	95·2
3 Jelly, Cherry ..	..	..	16·6	16·6
2 Jelly, Cranberry ..	·38	1·01	49·7	51·1
3 Jelly, Lemon ..			30·57	30·57
2½ Jelly, Orange ..			36·4	36·4
3 Jelly, Pineapple ..	..	..	41·06	41·06
3½ Jelly, Tomato ..	3·2	1·7	8·8	13·7

Oz. in ordinary serving.	Protein.	Fats.	Carbohydrates.	Total.
5½ Lemonade	..	..	14·2	14·2
3 *Dal* (Cooked)	8·5	·3	22·9	31·7
1¼ Lettuce with Lemon ..	1·1	·6	5·0	6·7
3 Macaroni and Tomato ..	5·0	3·80	17·16	26·0
1 Maple Sugar ..	·0	·0	96·6	96·6
1¼ Syrup	..	..	83·0	83·0
2½ Marmalade, Fig ..	2·8	·4	48·7	51·9
Mush melon				
6½ Milk, Skimmed ..	4·0	·8	6·0	10·8
6 Milk, Whole ×	3·8	11·0	5·8	20·6 ?
⅞ Nut Butter ?	34·2	124·0	20·0	178·2
¼ Nuts, Almonds ..	24·5	146·4	20·2	191·1
¼ Nuts, Almonds Salted ..	24·5	146·4	20·2	191·1
½ Nuts, Beech	25·5	153·1	15·4	194·0
⅛ Nuts, Butter ? ..	32·5	163·2	4·1	199·8
½ Nuts, Filberts ..	18·2	174·1	15·2	207·5
⅛ Nuts, Pecans ..	11·2	188·0	17·8	217·8
⅛ Nuts, Walnut, English ..	19·4	169·2	18·2	206·8
4¼ Oatmeal (Cooked) ..	3·3	1·3	13·4	18·0
1 Oatmeal Wafers ..	13·7	29·6	80·5	123·8
4¼ Oats, Rolled (Cooked) ..	3·3	1·3	13·4	18·0
Oil til				
⅓ Olive Oil ..	..	264·1	..	264·1
Oil mustard				
1⅓ Olives, Ripe (7) ..	2·0	69·1	5·0	76·1
Oil linseed				
4 Omlet ..	14·0	59·0	1·0	74·0
Oil Almonds				
2½ Onions, Boiled ..	1·13	4·29	5·1	10·52
Oil Peecanut				
3 Onions, Creamed ..	1·73	14·6	5·6	21·9
Oil cucumber seeds				
5 Orange Juice ..	..	..	15·1	15·1
4 Anar Juice				

× Page 11 herein gives 5 oz milk = 100 c

Oz. in ordinary serving.	Protein.	Fats.	Carbohydrates.	Total.
1 Orange Sauce ..	2·6	32·95	68·7	103·5
5 Oranges ..	·9	·5	13·5	14·9
3 Parsnips, Browned ..	2·0	11·85	11·31	25·2
3 Parsnips, Creamed ..	2·56	6·5	17·29	26·35
3 Parsnips, Mashed ..	1·7	5·9	9·5	17·1
2½ Patties, Rice ..	14·9	39·04	77·24	131·2
¼ Peanuts (China badam) ..	30·1	102·9	8·5	161·5
6 Pear Juice ..	..	..	25·6	25·6
4 Pears ..	·7	1·3	16·5	18·5
4 Pears, Cooked ..	·7	1·1	23·3	25·1
3 Peas, Green ..	7·8	9·1	17·5	34·4
3 Peas, Puree ..	8·5	9·0	17·5	35·0
4 Pineapples, Fresh ..	·5	·8	11·3	12·6
5 Pineapple Juice ..	..	..	21·8	21·8
3½ Pineapple Sauce ..	·5	·9	19·4	20·8
4 Plums ..	1·2	..	23·5	24·7
2¾ Plums, Cause ..	1·1	..	36·3	37·4
½ Popped Corn (Maize) ..	12·5	13·3	91·8	117·6
3 Potatoes, Baked ..	3·4	·4	28·9	32·7
3 Potatoes, Boiled ..	2·9	·3	24·4	27·6
3½ Potatoes, Browned ..	3·5	5·17	29·4	38·07
4½ Potatoes, Escalloped ..	3·6	10·7	21·0	35·3
3 Potatoes in Jackets ..	2·9	·3	24·4	27·6
3½ Potatoes, Mashed ..	3·0	8·0	20·8	31·8
3½ Potatoes, New, Creamed ..	3·2	12·87	18·74	34·81
3 Potatoes, Sweet, Browned ..	4·11	11·25	59·7	75·06

Oz. in ordinary serving.	Protein.	Fats.	Carbohydrates.	Total.
2½ Pudding, Baked Indian ..	4·8	21·8	20·0	46·6
3½ Pudding, Chocolate ..	4·95	23·5	30·38	58·83
3½ Pudding, Cream Rice ..	4·25	22·1	19·63	45·98
2½ Pudding, Date ..	7·2	23·3	66·75	97·2
2½ Pudding, Fig ..	4·7	15·3	34·7	54·7
2½ Pudding, Apple Tapioca ..	4·5	17·58	26·44	48·5
1 Radishes ..	1·5	·3	6·7	8·5
1 Raisins ..	3·0	8·8	88·8	100·6
3 Raisins, Cooked ..	2·0	5·8	57·6	65·4
4 Raspberries, Fresh Black ..	2·0	2·6	14·7	19·3
3½ Raspberries, Fresh Red ..	1·2		14·7	15·9
5 Raspberry Juice (Black) ..	..	..	29·4	29·4
5 Raspberry Juice (Red) ..	..	..	23·7	23·7
3½ Raspberry Sauce, Black ..	1·6	2·2	27·5	31·3
3½ Raspberry Sauce, Red ..	1·2		22·0	23·2
4 Rice, Boiled ..	3·3	·3	28·5	32·1
4½ Rice, Browned ..	3·88	·34	39·72	43·94
4½ Rice, Steamed or Creamed ..	3·28	9·91	21·18	34·37
1½ Salad, Apple and Celery ..	2·26	4·27	26·16	32·69
2½ Salad, Cherry and Plantain ..	1·5	1·9	32·5	35·9
2 Salad, Cauliflower ..	2·5	19·7	3·0	25·1
2 Salad, Chopped Cabbage ..	1·9	18·2	17·2	37·5
2½ Salad, Date and Apple ..	2·5	5·3	45·8	54·1
½ Salad, Dressing French ..	..	198·07	2·85	201·0
2 Salad, French ..	4·5	3·8	18·9	27·3
2½ Salad, Fruit ..	1·93	2·53	26·8	31·3

Oz. in ordinary serving.	Protein.	Fats.	Carbohydrates.	Total.
2½ Salad, Potato ..	4·56	25·77	15·06	45·39
2½ Salad, Vegetable ..	4·3	4·8	9·2	18·3
1⅓ Sandwich, Baked Beans ..	4·27	19·4	23·9	45·57
1¾ Sandwich, Cottage Cheese ..	11·2	33·9	37·6	82·8
1¾ Sandwich, Egg ..	10·0	50·12	39·09	99·29
1⅔ Sandwich, Fig ..	6·08	30·47	53·66	90·22
1½ Sandwich, Jelly ..	7·4	38·6	70·61	116·6
1⅔ Sandwich, Lettuce ..	6·8	38·2	37·0	82·0
4¾ Soup, Bean ..	9·4	4·0	24·7	38·1
4¾ Soup, Clear Tomato ..	3·1	7·0	8·9	19·0
4¾ Soup, Cream of Asparagus ..	3·24	18·33	4·57	26·14
4¾ Soup, Cream of Celery ..	2·8	19·0	4·7	26·5
4¾ Soup, Cream of Corn ..	3·5	18·5	10·0	32·0
4¾ Soup, Cream of *Dal* ..	6·1	14·6	13·2	33·9
3¾ Soup, Cream of Pea ..	5·9	18·0	13·2	37·1
4¾ Soup, Cream of Potato ..	2·7	19·2	9·0	30·9
4¾ Soup, Cream of Tomato ..	2·8	20·0	5·96	28·76
4¾ Soup, Vegetable ..	·96	5·71	6·9	13·5
3 Spinach ..	3·3	1·0	4·93	9·3
2½ Squash, Baked ..	1·6	2·2	16·0	19·8
4 Strawberries, Fresh ..	1·2	1·6	8·6	11·4
3½ Strawberry Sauce ..	·9	1·0	22·7	24·6
5 Strawberry Juice ..			24·5	24·5
⅛ Sugar (Granulated) ..	..	..	116·6	116·6
4 Tart, Blackberry ..	8·18	14·36	43·1	65·64
3⅞ Tart, Blueberry ..	5·2	12·7	47·4	65·3

Oz. in ordinary serving.	Protein	Fats.	Carbohydrates.	Total.
3½ Tart, Cocoanut Cream ..	6·46	23·0	31·31	60·77
4 Tart, Custard ..	4·9	16·8	30·5	52·2
4 Tart, Cherry ..	8·2	14·6	46·0	68·6
4 Tart, Date Cream ..	10·4	21·4	21·9	73·7
4 Tart, Lemon ..	7·94	26·9	38·7	73·54
5 Tart, Mince ..	15·09	22·3	35·1	72·39
5 Tart, Pumpkin ..	3·25	7·26	24·88	35·4
5 Tart, Raspberry ..	8·18	14·36	43·1	65·64
5½ Tart, Squash ..	4·27	22·7	36·5	63·5
3½ Tomatoes, Breaded ..	1·3	4·5	7·9	13·7
2½ Tomatoes, Stewed or Canned.	1·4	·5	4·7	6·6
4 Tomatoes, Sliced ..	1·0	1·1	4·6	6·7
4 Turnips, Mashed ..	·6	2·8	2·7	6·1
8 Watermelon ..	·5	·5	7·8	8.8
½ Whipped Cream ..	2·9	49·3	10·14	62·3

Watermelon. See English