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MEAL PLANNING

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Meal Planning

By Florence Imlay

PROBLEMS OF MEAL PLANNING

Planning the meals for the day would be comparatively simple if all members of the family were approximately the same age, were doing the same type of work and were in good health. But in most families there are the complications of some doing light work and others heavy work, of the young child, the adolescent, the middle-aged and perhaps older persons, or of members who must eat only certain foods on account of illness. Besides, food should be selected in relation to the family income and the time required in its preparation.

The one who plans the meals should have a thoro knowledge of the food requirements of the body, as well as of the nutritive values of the various foods, in order that the children of the family may get those elements needed for growth, and that both the younger and older members may receive foods needed for energy and for keeping the body in good condition.

IMPORTANT CONSTITUENTS OF FOODS, AND THEIR FUNCTIONS

The following table gives the important constituents of foods and the part which each plays in the body processes.

Food Constituents	Children	Adults
Proteins	Build body tissue and keep it in repair.	Repair body tissue.
Carbohydrates Fats	Give energy for play, for warmth, and for carrying on the body processes.	Give energy for work, for play, for warmth and for carrying on the body processes.

IMPORTANT CONSTITUENTS OF FOODS AND THEIR FUNCTIONS —Continued.

Food Constituents	Children	Adults
Minerals Calcium, Iron, Phosphorus, Iodine, etc.	Help to build and repair bone, muscle, blood, etc. Aid in body processes such as digestion, heart action, body secretions, etc. Help to keep body in good condition.	Aid in body processes, such as digestion, heart action, body secretions, etc. Help to repair bony and muscular tissues and build new red corpuscles. Help to keep body in good condition.
Vitamins	Necessary for growth and health.	Help keep the body in good condition.
Cellulose	Aids digestion. Helps in preventing constipation.	Aids digestion. Helps in preventing constipation.

Note that *carbohydrates* and *fats* do not have building power, but only produce energy for warmth and activity. When more carbohydrates and fats are eaten than are needed for energy and the body processes they are stored in the body as fatty tissue.

Proteins are the tissue builders and are needed in comparatively small amounts. The protein requirement for children will be met if a quart of milk, an egg and a serving of whole cereal are used daily, with an occasional serving of meat. A pint of milk, one egg, whole cereal in some form, and a serving of meat or cheese will be sufficient to meet the adult's daily protein needs.

Minerals are needed only in small amounts, but they are very important in building bone and muscle, making blood, and aiding in all the body processes. Altho many minerals are required to keep the body in good condition most of them are needed in such small quantities that they are supplied in any diet that includes a variety of foods. However, iron calcium and phosphorus are so necessary that special attention should be given to them in planning the menu. *Calcium* (lime) is necessary to harden the bones and teeth and to stimulate heart action. Milk contains a larger proportion of calcium than other foods, and is our best source of this element. A quart of milk should be used daily in some form by children and a pint by adults. With our present knowledge of food requirements it is practically impos-

sible to get sufficient calcium from other foods alone. See table II for a list of foods suitable for supplying calcium. *Iron* is essential in building red blood corpuscles. It is undoubtedly the most difficult food constituent to supply, because foods contain it in such small quantities. An insufficient amount of iron in foods

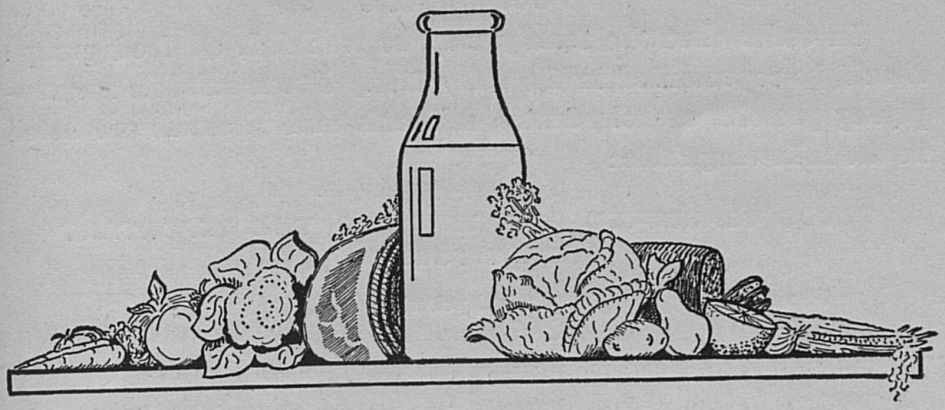

Figure I. Types of foods which should be included in the daily diet.

leads to lowered vitality, fatigue, a lack of resistance to disease, and eventually an anemic condition. People who have finicky appetites, especially teen-aged girls, frequently have anemia in quite a bad form. See Table II for a list of foods suitable for supplying iron. *Phosphorus* is necessary in building bone and muscle, but since foods rich in calcium and protein also contain phosphorus, the requirement is met when materials containing sufficient amounts of these substances are included in the diet.

Vitamins have properties which stimulate growth and help to build up resistance to certain diseases. A lack of vitamin A results in stunted growth in children, sore eyes, and generally poor health at all ages. Vitamin B is necessary for growth, helps to stimulate the appetite, and aids digestion. Beriberi, a disease prevalent in the Orient, and pellagra, prevalent here in the South, are induced by a lack of different parts of vitamin B in the diet. Vitamin C promotes normal growth and health, and helps to keep the teeth in good condition. A lack of vitamin C results in a disease known as scurvy.

Cod liver oil is rich in vitamin C which is essential for the prevention of rickets. It should be included in the daily diet of

the child during the winter when we do not get so much sunlight as in summer. A detailed discussion of vitamins is given in a leaflet which may be gotten from the Extension Division of the College of Agriculture, on request.

FOOD GROUPS

In order that the family may be well fed, all food groups should be represented in the daily diet. Foods suitable for supplying protein, carbohydrates, minerals and vitamins are listed in the following table:

FOODS CLASSIFIED ACCORDING TO THE IMPORTANT CONSTITUENTS

Proteins	Carbohydrates	Fats
Lean meat	Sugar	Butter
Beef	Jellies	Lard
Mutton	Jams	Vegetable oils
Lamb	Syrups	Corn oil
Chicken	Molasses	Cotton seed oil
Pork	Candy	Olive oil
Fish	Breads	Pork
Cheese	Rice	Bacon
American	Macaroni	Cream
Cottage	Potatoes	Nuts
Eggs	Sweetpotatoes	
Milk	Dates	
Beans (dried)	Bananas	
	Cereals	

Calcium	Iron	Vitamin A	Vitamin B	Vitamin C
Milk	Spinach	Butter	Asparagus	Tomatoes
Cheese	Kale	Cream	Dried beans	Cabbage—raw
String beans	Chard	Carrots	Spinach	Grapefruit
Peas	Liver	Eggs	String beans	Orange
Dried beans	Egg yolk	Liver	Whole wheat	Lettuce
Lettuce	Beef (lean)	Milk (whole)	bread	Rutabagas
Carrots	Dandelion	Spinach	Whole cereals	Apples
Spinach	Cabbage		Cabbage	Bananas
	String beans		Carrot	Potatoes
	Peas		Cauliflower	
	Dried beans		Celery	
	Whole wheat bread			

DISTRIBUTION OF THE DAY'S FOOD

The distribution of the day's food in the different meals does not vary much for children, but for adults it depends to a great extent upon occupation and habits. Breakfast probably varies more than any other meal. For the adult who does sedentary work and who eats a good lunch, a light breakfast of fruit, toast or rolls and a beverage is sufficient; but for the person who works outdoors many hours doing muscular work more food is needed. Breakfast for everyone should include foods with laxative qualities such as cereals in some form and fruits either raw or cooked with little sugar.

When possible, it is a good plan to serve foods at night which can be digested easily, such as creamed soups, creamed or buttered vegetables, fruit or vegetable salads, eggs, cottage cheese dishes and simple desserts as fruits, custards, ice creams, etc. If it be necessary to have a light lunch at noon, and the more substantial meal at night, greater use can be made of rich meats, pastries, cakes, puddings and sauces.

The day's meals should be thought of as a unit to include all the nutritive properties necessary for growth, energy, and keeping the body in good condition, but care should be taken that no one group of foods, food constituents as carbohydrates, proteins or fats, predominate at a meal. It is much easier to use the full quota of milk per person if it is distributed thruout the day. Special care should be taken to include in every meal a food containing iron.

The analysis of the following summer menus is suggestive of the manner in which they should be built up and adapted to the seasons of the year.

SUGGESTIVE SUMMER MENUS

I.

Breakfast	Dinner	Supper
Apple sauce	Mashed potatoes	Creamed eggs on toast
Cooked cereal with cream	Baked young chicken	Stuffed tomato salad
	Creamed carrots	Rolls

Breakfast	Dinner	Supper
Bacon	Cabbage with cream dressing	Butter
Toast (whole wheat)	Muffins	Tapioca cream with peaches
Butter	Butter	Milk
Milk for children	Chocolate blancmange	
Coffee for adults (if desired)	Milk	

II.

Breakfast	Dinner	Supper
Berries	Scalloped potatoes and ham	Cheese souffle
Shredded wheat with cream	Buttered spinach	Fresh vegetable salad (lettuce, tomato, celery, etc.)
Bacon	Fruit salad	Baked apple
Toast	Caramel custard	Rolls
Butter	Bread	Butter
Milk for children	Butter	Milk
Coffee for adults (if desired)	Milk for children	

III.

Breakfast	Dinner	Supper
Cantaloupe	Baked sweet potatoes	Macaroni loaf with tomato sauce
Poached eggs on toast (whole wheat)	Creamed dried beef	Buttered string beans
Butter	Scalloped corn	Rolls
Milk for children	Lettuce salad	Butter
Coffee for adults (if desired)	Brown betty	Peaches and cream
	Bread	Sponge cake
	Butter	Milk
	Milk for children	

In analyzing each day's menu, we find that the following food classes are always included:

a. At least two vegetables, besides potatoes, one a raw vegetable
b. Two fruits, one raw.
c. Whole cereal in some form.
d. One serving of meat.
e. One quart of milk is allowed for children, a pint for adults, (one cup in cooked foods, the rest as a beverage).
f. One egg per person; on the second day one-half egg per person is allowed, in the custard and the rest in the fondue.

The essential food properties necessary for energy, growth and health are found in each day's menu.

a. Vitamin A is found in the butter, cream, apple, egg yolk, spinach, carrots and lettuce; vitamin B in the milk, cabbage, carrots, string beans, tomatoes, lettuce and egg, and vitamin C in the tomato, apple, lettuce, string beans (cooked just until tender), cabbage (raw).
b. One quart of milk for children and one pint for adults insures the calcium requirement.
c. In the first day's menu, the iron is found in egg yolk, peach, cabbage, apple and whole wheat bread; the second day in the spinach, egg, apple, whole wheat bread; and the third day in the egg, string beans, apple, peaches and whole wheat bread.
d. The protein is contributed by the egg, meat, milk and whole wheat bread. If meat were served in large amounts or more frequently than once a day, the proportion of protein would be too large.
e. The energy is supplied by the cereal, potatoes, bread, macaroni, butter, cream and sugar.
f. Whole cereals, coarse-fibered vegetables and fruits have laxative qualities.

These menus may be adapted to other seasons of the year by using:

a. Vegetables and fruits in season.
b. Raw vegetables which can be stored, such as cabbage, carrots and celery.
c. Canned vegetables in place of fresh ones.
d. Apples, oranges and grapefruit as much as possible, supplementing them with canned and dried fruits.
e. Gelatin desserts and salads in place of those prepared with fresh vegetables and fruits.

GENERAL RULES FOR MEAL PLANNING

If the following suggestions for planning menus are kept in mind they will help to make the meals appetizing, interesting, attractive and well balanced:

1. Use the day as a unit and make out at least one day's menus at a time.
2. Distribute the protein, carbohydrates and fats thruout the day and do not have one type of food predominating at a meal, such as potatoes, sweet-potatoes. white bread and rice, or meat, a cheese dish and mincemeat pie.

3. Do not serve the same food twice in one meal, as tomato soup and tomato salad, or creamed carrots and carrot salad.
4. Do not serve more than one strongly flavored food at a meal, as onions and cabbage.
5. Balance the soft, solid and crisp foods. That is, do not serve all soft foods at one meal and all solid or dry at another.
6. Do not serve several acid or several sweet foods at one meal.
7. Season foods mildly.
8. Avoid serving several foods difficult to digest at the same meal.
9. Serve left-overs in a new form and always attractivley. When possible do not serve them the next meal.
10. Have foods prepared in a palatable form—greasy meats and vegetables, and highly seasoned feeds are not appetizing to most persons and are difficult to digest.
11. The daily menu should include:
    a. One quart of milk for children, one pint for adults.
    b. Two vegetables besides potatoes, one raw. (Green leaf vegetables three times a week.)
    c. Two fruits, one raw.
    d. Whole cereal in some form.
    e. One egg and a serving of meat for adults. (A small serving of meat for children about three times a week.)
12. Serve light desserts, as raw fruits, fruit sauces or gelatins and ices, with a heavy meal.
13. Serve rich desserts, as pie, steamed puddings, shortcakes, and rich gelatin desserts, with a light meal.
14. Serve potato or macaroni salads as a main carbohydrate dish; chicken, meat or fish salads as the main protein dish of the meal.
15. Serve only one relish or jam at a meal.
16. Avoid serving colorless meals.
17. Lay the table attractively, using flowers when possible.
18. Serve cooling foods in summer and warming foods in winter.
19. Serve hot things hot and cold things cold.
20. Plan simple menus.
21. Consider cost carefully.

RECIPES

Creamed Carrots

Wash, scrape and cut in one-half inch cubes. Cook in boiling water until tender. (Use just enough water to cover.) Add ¾ teaspoon salt for every quart of water. Cook until tender, drain and add one cup of white sauce for two cups carrots.

White Sauce

2 tbsp. butter
3 tbsp. flour
⅛ tsp. salt
1 c. hot milk or milk and vegetable stock

Melt the butter in the saucepan and add flour. Mix thoroly. Add the hot milk slowly. Cook until thick. Add the salt.

This same proportion may be used for all vegetables. Variety may be given by the addition of grated cheese, diced ham or bacon, celery seed, onion juice, etc.

Baked Ham With Potatoes

2 tbsp. butter
⅓ c. flour
2 tsp. salt
2 c. milk
4 c. raw potatoes (⅛ inch thick)
1 slice of ham, 1 inch thick

Blend the butter, flour, salt and milk as for white sauce. Cook. Arrange the potatoes in an oiled baking dish, pour over the white sauce. Lay the ham, which has the rind and some of the fat removed, on top. The food should not come to within more than 1 inch of the top of the dish in order to avoid cooking over in the oven. Cover and bake in a moderately slow oven for one hour. A hot oven causes the milk to have a curdled appearance. Remove cover to brown and finish cooking.

Cheese Souffle

4 eggs
1½ c. milk
1 c. fine dry bread crumbs
1 tbsp. butter
1 c. grated cheese
¾ tsp. salt

Heat the milk, bread crumbs, and butter in a double boiler. Add grated cheese to the hot mixture and stir until the cheese has melted. Add this mixture to the well-beaten egg yolks. Fold the hot mixture into the stiffly beaten egg whites containing the salt, pour into a buttered dish, and bake in a very moderate oven (300° F.) for one hour, or until set in the center. Serve immediately.

Baked Custard

2 c. hot milk
2 large or 3 small eggs
⅛ tsp. salt
¼ c. sugar
½ tsp. vanilla or other flavoring

Beat the eggs slightly, add sugar, salt and hot milk. Pour into individual molds or into a large enough baking dish so that the custard will not be more than two inches thick. Set molds or baking dish into a pan of hot water and bake in a moderate oven until firm.

Dates, cocoanut, or marshmallow may be added for variation, or different flavoring such as nutmeg, cinnamon, caramel or maple may be used. Plain custards may be served with sliced peaches, berries or jam.

Brown Betty

2 tbsp. butter
2 c. bread crumbs
3 c. chopped apples
½ c. brown sugar
½ tsp. cinnamon
Grated rind of ½ lemon
1 tbsp. lemon juice
¼ c. water

Melt butter and add crumbs, stir until thoroly mixed. Put into a baking dish a layer of crumbs, and then a layer of apples and seasonings. Cover with crumbs and bake in a moderate oven until apples are tender. May be served with cream or hard sauce.

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