

Dietotherapy

THE BLAND DIET

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A DIET DESCRIBED as "bland" is one in which the choice of foods is restricted to those which are smooth and soothing in effect. By contrast, mechanical, chemical, and thermal irritation to the mucous membranes is avoided. The bland diet is useful in many disturbances of the gastrointestinal tract such as peptic ulcer and chronic ulcerative colitis. A basic plan is described in this paper and may be adapted to a variety of needs.

CHARACTERISTICS OF THE BLAND DIET

The bland diet may be planned to achieve the following objectives: (1) establish and maintain nutritional balance for all essential nutrients; (2) prevent mechanical irritation of the gastrointestinal tract; (3) reduce gastric acidity by inhibiting secretion and by neutralizing or diluting the gastric contents; and (4) be acceptable to the patient.

Fiber Content

The bland diet is restricted in its fiber content because it is believed that coarse fibers may irritate sensitive mucous membranes. The skin, seeds, and cellular structure of plant foods constitute the chief sources of fiber in the diet. The amount of fiber depends not only upon the kind of plant but also upon the degree of maturity. For example, celery is known for its fibrous nature, whereas white potato and carrots, when skins are removed, contain a minimum amount of fiber; young green beans contain small amounts of soft fiber, whereas mature green beans contain sufficient amounts of woody fiber so as to characterize them as being tough.

The fiber content of the normal diet may be reduced by these progressive stages: (1) selecting only those varieties of foods known to be low in fiber; (2) using tender young vegetables rather than those which are over-ripe; (3) avoiding the skins and seeds of vegetables and fruits; (4) allowing only cooked vegetables and fruits, since cooking softens and disintegrates the fiber; and (5) puréeing fruits and vegetables and using only refined cereal foods.

Meats contribute fiber in the form of indigestible connective tissue; thus the tenderness of meat is dependent upon the amount of connective tissue which is present. This in turn is affected in part by the age of the animal from which the meat comes, and in part by the degree to which the muscle has been exercised. Tender cuts such as chops, steaks, oven roasts, and chicken may be used without chopping or grinding. Fish contains very little connective tissue and may be used without chopping.

It is not always appreciated that many less tender cuts of meat are equally well tolerated if they are suitably prepared. Cookery with moist heat at low temperatures results in changing the collagen to gelatin without toughening of the proteins. Pot roasting and stewing may be used for the more economical cuts of meat; usually the liquor in which these meats are cooked is not served to the patient.

Few diets are less well accepted than those in which fruits and vegetables are all cooked and puréed, meats are all ground, and cereals are cooked and strained. Undoubtedly, these drastic restrictions are necessary at times, but rarely is it necessary to continue them for a prolonged period. Present trends are in the direction of a more liberal diet which permits tender cooked vegetables and fruits of low-

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fiber content and tender meats. It is pointless to insist upon the puréed foods if the patient refuses to eat them; indeed, such refusal will jeopardize good nutrition.

Flavor

Strongly flavored or "gas-forming" vegetables such as onions, broccoli, cabbage, turnips, and others are usually avoided. Overcooking of such vegetables results in the release of irritating sulfur compounds, but the decomposition products can be kept at a minimum if the vegetables to be cooked are heated quickly in order to destroy the enzymes which facilitate breakdown of the sulfur compounds.

Whether the stimulation of gastric acidity brought about by nonprotein nitrogenous substances such as creatine, purines, etc., or by highly seasoned foods is sufficient to cause harm has not been clearly determined. Some persons do experience discomfort following the use of such items in the diet. Customarily, meat soups and gravies are omitted from the bland diet if it is to be used in the treatment of peptic ulcer. Likewise, relishes, catsup, mustard, pepper, horseradish, and numerous other highly seasoned foods may be contraindicated. On the other hand, moderate amounts of salt and such spices as nutmeg and cinnamon lend interest to foods without undue stimulation. Discretion in the choice of foods and in the amount of seasoning used, rather than complete omission, would appear to be the sensible course to follow.

Reduction of Gastric Acidity

When the bland diet is used for peptic ulcer it is essential that gastric acidity be reduced. In the absence of anxiety and tension, the proper choice of food can result in a diminished flow of gastric juice or neutralization of the gastric juice or both. Fats are well known for their inhibitory effects on the gastric secretion, but their choice is restricted to those which are highly emulsified, such as are found in whole milk, cream, butter, and egg yolk.

Protein foods are effective in neutralizing the acid of the stomach. Milk has especially high buffering properties and becomes a basic food upon which the bland diet is planned.

Meat, poultry, fish, and eggs are likewise useful for their neutralizing properties.

Intervals of Feeding

The bland diet may be given in three meals of moderate size together with smaller feedings at midmorning, midafternoon, and bedtime. The use of frequent feedings serves to dilute the stomach contents when that is desirable and, for some persons at least, results in more nearly adequate intake of nutrients.

Nutritive Adequacy

The patient who has been ill for some time may be suffering from a variety of deficiencies occasioned by an inadequate intake of nutrients because of undue dietary restriction. Many diets used for the treatment of peptic ulcer have been seriously inadequate in protein, iron, ascorbic acid, and thiamine. Disease itself may impose additional demands, as in the healing of tissue, or to compensate for poor absorption.

Long dependence upon a milk and cream diet, as used in some ulcer regimens, results in deficient intake of protein at a time when greater than normal levels are desirable for prompt healing. The omission of milk, on the other hand, as in some plans for the treatment of ulcerative colitis, can be equally debilitating if the intake of other protein foods is not correspondingly increased. Particular emphasis should be given to the inclusion of milk, eggs, meat, poultry, and fish; nonfat milk solids are useful in supplementing the protein intake when deficits must be corrected.

The iron content of restricted diets is likely to be low. Moreover, the use of alkali therapy may interfere with the absorption of dietary iron; supplementary iron is frequently indicated.

The belief that citrus juices may irritate mucous membranes is widely held, but even momentary discomfort can be avoided when such juices are taken at the end, rather than at the beginning, of the meal. Two servings should be included daily, since cooked vegetables and fruits cannot be relied upon to supply the necessary vitamin C. Thiamine can be provided in adequate amounts if en-



TABLE I
Nutritive Value of a Basic List of Foods for the Bland Diet*

Food	Household measure	Weight Gm.	Energy cal.	Protein Gm.	Fat Gm.	Carbo- hydrate Gm.	Minerals				Vitamins			
							Ca mg.	Fe mg.	A I. U.	Thiamine mg.	Ribo- flavin mg.	Niacin mg.	Ascorbic Acid mg.	
Milk	1 quart	976	670	34	38	48	1152	0.8	1,560	0.36	1.68	1.2	12	
Eggs	2	108	150	13	12	Tr	52	2.6	1,100	0.10	0.28	Tr	0	
Meat, poultry, or fish	4 ounces (raw wt.)	90	275	21	21	0	8	2.7	1,710†	0.22	0.30	5.2	0	
Enriched fine cereal	1/2 cup (cooked)	30	110	3	Tr	24	12	0.9	0	0.16	0.05	1.0	0	
Enriched white bread	4 slices (dry wt.)	100	275	9	3	52	79	1.8	0	0.24	0.15	2.2	0	
Potato	1 medium	150	125	3	Tr	29	17	1.0	30	0.14	0.05	1.5	21	
Cooked leafy, green, or yellow vegetable	1 serving	100	30	2	Tr	6	44	1.0	3,180	0.08	0.08	0.7	15	
Cooked vegetable	1 serving	100	35	1	Tr	7	19	0.6	660	0.06	0.06	0.6	3	
Citrus fruit	2 servings	200	90	2	Tr	24	54	0.8	240	0.14	0.06	0.4	94	
Other fruit	2 servings	200	125	1	1	32	24	1.0	1,200	0.08	0.08	0.8	8	
Butter or fortified margarine	2 tablespoons	30	215	Tr	24	Tr	Tr	0	990	Tr	0	Tr	0	
			2100	89	99	222	1461	13.2	10,670	1.58	2.79	13.6	153	

* Average values for each food group have been computed according to the percentage distribution of food supplies as described in *Planning Food for Institutions*, Agriculture Handbook No. 16, U. S. Department of Agriculture, 1951, table 6.

† Food values used are those published in *Composition of Foods—Raw, Processed, Prepared*, by B. K. Watt and A. L. Merrill, Agriculture Handbook No. 8, Bureau of Human Nutrition and Home Economics, Washington, 1950.

Values for cooked foods have been used when the food is normally cooked before its use.

Calories and vitamin A have been rounded off to the nearest 5 and protein, fat, and carbohydrate to the nearest whole gram.

† Vitamin A values would be reduced to 0 for meat, poultry, and fish if an average serving of liver is not included each week.

riched bread and cereals are used, and if some meat is included daily.

A Plan for the Bland Diet

The nutritive value of a basic list of foods for the bland diet is given in Table I. This list of foods is to be regarded as a minimum, and not a complete enumeration of the needs of every individual. For example, the suggested meal plan includes additional foods to complete the menu pattern and to provide calories as needed.

Suggested Meal Pattern

Sample Menu

<i>Breakfast</i>	
Fine or strained cereal	Rice Krispies
Milk for cereal and to drink	Milk
Egg—not fried	Poached egg on buttered toast
Enriched white toast	
Butter or fortified margarine	
Citrus fruit juice	Orange juice—4 ounces
Coffee with cream or milk	Coffee with hot milk
Sugar	Sugar
<i>Midmorning</i>	
Milk beverage	Milk—8 ounces
<i>Noon Meal</i>	
Cream soup, if desired	Cream of tomato soup
Meat, fish, poultry, egg, or cheese	Macaroni and cheese
Potato or substitute	
Cooked green or yellow vegetable—low-fiber or puréed	Chopped fresh spinach
Enriched white bread	Bread
Butter or fortified margarine	Butter
Cooked fruit or ripe banana	Canned peaches
Milk	Milk
<i>Midafternoon</i>	
Milk beverage or dessert made with milk	Baked custard Sugar cookies
<i>Evening Meal</i>	
Meat, fish, or poultry	Broiled liver with crisp bacon
Potato	Creamed potatoes
Cooked vegetable—low-fiber or puréed	Baked Hubbard squash

Enriched white bread	Bread
Butter or fortified margarine	Butter
Dessert	Vanilla ice cream
Citrus fruit or tomato juice	Tomato juice—8 ounces*
Milk	Hot cocoa

Bedtime

Milk beverage	High-protein milk
Plain cake, cookies, crackers, or sandwich	Sponge cake

Foods from Which to Choose

Foods to Avoid

Beverages:

Milk and milk drinks	Alcohol
Coffee, limited to 1 cup daily, diluted with milk, cream	Carbonated beverages
Weak tea	Coffee or tea in excess

Breads:

White enriched bread	Coarse whole-grain bread
Rye bread without seeds	Graham crackers
Melba toast; Zwieback	Fresh bread or sweet rolls
Soda crackers	Salty crackers and pretzels

Cereals:

Cornflakes, puffed rice, rice flakes	Bran
Farina, rice, cornmeal, hominy grits	Whole-grain cereals
Macaroni, spaghetti, noodles	
Strained oatmeal, pottijohns	

Cheese:

Cottage, cream, mild cheddar	Strongly flavored cheese
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Desserts:

Plain puddings without nuts, whole fruit or spices: bread, rice, cornstarch, tapioca	Any containing whole raw fruit, fruit with seeds; spices; or nuts
Custard; Junket	Gingerbread
Plain gelatin desserts	Doughnuts
Plain ice cream, ices, sherbets	Pastries; pies; tarts
Sponge or angel cake; sugar cookies; lady fingers	
Fruit whips	

Eggs—Any way except fried

Fats:

Butter or fortified margarine	Salad dressings
	Mineral oil

* Eight ounces of tomato juice are approximately equal to 4 ounces of orange juice in ascorbic acid content.



*Foods from Which to Choose**Fats (cont.):*

Cream
Vegetable oils and fats

Fruits:

Raw: avocado, banana,
strained citrus juices
Cooked, without skin:
apple, peach, pear,
apricot
Cooked, puréed: plums,
prunes, cherries

Meats—very tender or ground

Roasted, broiled, baked,
stewed, creamed—
bacon, beef, chicken,
fish, lamb, liver,
sweetbreads, veal

Soups:

Cream, using allowed
vegetables

Vegetables:

White potato—any way
except fried
Tender asparagus tips,
beets, carrots, peas,
string beans, sweet
potato, spinach, win-
ter squash—chopped
or strained, unless
tender

Foods to Avoid

Raw, except as listed
Berries
Figs
Pineapple

Salted or smoked meats
Prepared luncheon meats,
frankfurters
Sausage
Fatty meat or fish
Tough meats

Meat stock

Strongly flavored: cab-
bage, cauliflower, Brus-
sels sprouts, cucumber,
onion, radishes, green
pepper, turnips, dried
beans and peas; corn
Raw vegetables

Miscellaneous:

Salt and sugar in mod-
eration
Nutmeg and cinnamon

Catsup; chili sauce; meat
sauces; horseradish;
mustard; pepper; vine-
gar
Candy; fried foods; grav-
ies; nuts; salty foods;
pickles; popcorn

Variations of the Bland Diet

Slight modifications in the plan described above make it possible to use it for a variety of needs. For some patients with peptic ulcer temporary modifications might include: (1) the omission of meat, with increased use of eggs and nonfat milk solids; (2) puréeing of all fruits and vegetables; (3) milk mixed with half cream and given at frequent intervals during the day and night—usually every two hours.

In chronic ulcerative colitis it is sometimes necessary to incorporate milk in prepared dishes rather than serving it as a beverage since idiosyncrasy to milk is frequent. On the other hand, meat, poultry, and fish are usually well tolerated and may be used liberally. Meat soups, meat extractives, tea, and coffee may be used as desired.

In situations where gastric secretion and motility are decreased the bland diet may be modified by restricting the amount of fat.

Shifting Adiposity

“Shakespeare’s keen observant eye, which missed little, noted that in late middle age the legs lose girth whilst the abdomen gains. What is the origin or significance of this? Some say that discontinuance of stooping conditions the abdominal adiposity; others are equally convinced that the adiposity inhibits stooping. The truth may lie in between or there may be that reciprocal reinforcement which Herbert Spencer asserted is so common a feature in biological happenings. But certainly this strange shift of fatty tissue from the legs to the abdomen is a fairly regular concomitant of old age and must have some meaning. . . . Truly the unexplored area in the territory of the physiology and pathology of adipose tissue is greater than the explored and demands investigation.”

—“A Decreasing Leg—an Increasing Belly.” Leading article. *The Medical Journal of Australia* 40: 895, 1953.