

# Diet Therapy



## The High Calorie Diet

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WITH overweight ranking as the top nutritional problem in this country and low calorie diets and dishes favorite conversational topics everywhere, a high calorie diet sounds refreshingly different, if not a little indecent. After endless struggling to get the most food for the fewest calories on the reducing regimen, what a joy it should be to say, "Eat everything you want—and lots of it!"

Seldom is the solution this simple. Anorexia is often attendant in conditions indicating a high calorie diet. Disinterest in food and/or poor eating habits of long standing may be a causative factor in cases of underweight or malnutrition. Looking at a tray or table loaded with food to be consumed may dispose of such appetite as the patient has. Between meal feedings? Maybe, but frequently these leave the patient with no desire for food at mealtimes. Caloric deficits commonly are accompanied by inadequate intakes of protein, vitamins and minerals. Finally, consuming large amounts of calorie rich foods does not assure that a person will be well nourished, for any food therapy should be based on or be a modification of a basic, well balanced diet.<sup>1</sup>

### NUTRITIVE INCREMENTS

The Recommended Dietary Allowances<sup>2</sup> suggest 3,000 calories daily for the reference man of forty-five years and 2,200 calories for the woman of the same age. Setting an arbitrary level for the high calorie diet is obviously

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impossible, but consuming 500 calories in excess of the daily requirement should cause a gain of about a pound a week. In febrile states, when there is interference with absorption or when the metabolic needs are increased, a greater increment may be necessary.

Protein, fat and carbohydrate allowances will vary also, depending on the health, economic status and eating patterns of the person. However, there are a few basic factors that should influence the amount included in the diet:

### *Protein*

An optimum protein allowance is desirable for replacement and repair of body tissues. One hundred grams or more is the customary allowance on a high calorie diet.

### *Fat*

Unless definitely contraindicated by the individual's condition, a moderate fat allowance should be made. Fat enhances the palatability of the diet and permits a significant caloric increase without a corresponding increase in bulk. It is difficult to plan a high calorie diet that is low in fat which will be acceptable to most patients. Fats should not be used excessively, however, or they will dull the appetite with their high satiety value.

### *Carbohydrate*

Breads, cereals, cereal products and dishes made from these will provide thiamine, niacin, riboflavin and iron as well as calories. Sugar, jellies, jams, candies and other concentrated

TABLE I  
High Calorie Diet\*

Food	Household Measure	Approximate Calories	Protein (gm.)	Fat (gm.)	Carbohydrate (gm.)
Milk	3½ cups	580	32	35	42
Eggs	2	160	12	12	tr.
Meat, poultry and fish	6 ounces	450	49	24	tr.
Potato	1 medium	90	3	tr.	21
Green and yellow vegetable	½-¾ cup	30	2	tr.	6
Other vegetable	½-¾ cup	40	2	tr.	8
Citrus fruits	1 serving	45	1	tr.	12
Other fruit	2 servings	120	2	tr.	32
Cereal, enriched or whole grain	¾ cup	105	3	tr.	24
Bread, enriched or whole grain	6 slices	360	12	6	72
Butter or fortified margarine	4 tablespoons	400	tr.	44	tr.
Half and half (half cream and half whole milk)	½ cup	165	4	15	8
Sugar, sweets	3 tablespoons	150	0	0	36
Soup (or extra serving of cereal or potatoes)	¾-¾ cup	80	3	2	12
Dessert †		190	4	6	30
Total		2,965	129	144	303

\* Adapted from PROUDFIT, F. T. and ROBINSON, C. H. Normal and Therapeutic Nutrition, 12th ed., p. 337. New York, 1961. The Macmillan Co.

† Desserts include plain gelatin, pie, cake with icing, custard, ice cream, cookies and plain pudding.

sweets may be used, but discretion is required since large amounts will interfere with the appetite.

The high calorie diet listed in Table I will provide approximately 3,000 calories, 130 gm. of protein and abundant amounts of vitamins and minerals.

An infinite number of meal patterns incorporating these foods can be planned to suit the needs and mode of life of the patient. A typical meal pattern and menu derived from it are outlined in Table II.

The foods in the basic diet may be arranged in various combinations to suit the eating habits, cultural patterns and preferences of the individual. Spaghetti, pancakes, jumbo sandwiches, hearty chowders with lots of crackers and other mixed dishes can provide substitutes for several slices of bread since some patients find it difficult to consume this amount of bread. Such items also allow incorporation of some of the other basic foods into the diet.

Butter or margarine may be used on vegetables, on eggs, in hot cereals or in cooking or baking. Up to half of the allowance might be replaced with cooking oils or shortenings.

If half cream and half milk is not desired, an equal amount of undiluted evaporated milk or one third cup of light cream may be used. Additional butter or margarine, salad oils and dressings, cooking oils or fats may be used in place of some of the half and half. Substituting oils, fats or butter would result in a lowered protein content of the diet.

Eggs may be used in egg-nogs, in cooking or baking if desired. An egg, 1 ounce of meat, 1 ounce of fish, poultry or cheese may be used interchangeably according to the preferences of the patient. If more feedings are desired and desirable, this also can be arranged very easily.

A knowledge of the patient's customary eating habits and kinds and amounts of foods consumed is invaluable. On this diet or around its strong points the new regimen can be built. (A diet based on or incorporating former eating patterns will elicit a much more favorable response from the patient than a completely new diet which allows no place for individual preferences.)

The dietary change and its attendant caloric increments should be introduced gradually. A

TABLE II  
Meal Pattern and Menus

Meal Pattern	Sample Menu
<i>Breakfast</i>	
Citrus fruit—1 serving	Orange juice
Cereal—3/4 cup	Oatmeal
Half cream and half milk—for cereal and/or beverage; may be divided throughout the day—1/2 cup	Half and half
Milk—for cereal and to drink—1 cup	Milk
Eggs, any style—2	Scrambled eggs
Toast—1 slice	Toast
Butter or margarine—1 tablespoon	Butter
Beverage	Coffee
Sugar, jelly—1 tablespoon	Sugar for cereal and beverage; jelly for toast
<i>Lunch or supper</i>	
Soup	Cream of pea soup
Meat, poultry or fish—2 ounces	Ham sandwich on rye bread
Bread—3 slices	Crackers with soup
Butter or margarine—1 tablespoon	Butter
Green vegetable—1 serving	Tossed salad with French dressing
Fruit—1 serving	Baked apple
Milk—1 cup	Milk
<i>Dinner</i>	
Meat, poultry or fish—3 ounces	Pot roast with gravy
Potato—1	Baked potato
Vegetable—1 serving	Buttered peas
Bread—1 slice	Hard roll
Butter or margarine—2 tablespoons	Butter for roll and vegetables; sour cream for potato
Fruit—1 serving	Peach salad
Dessert—1 serving	Gold cake with chocolate icing
Beverage	Tea with sugar
<i>Evening snack</i>	
Milk—1 cup	Milk or milkdrink
Bread—1 slice	Crackers
Meat, poultry or fish—1 ounce	Cheese

stepwise increase is a much more practical and realistic way of achieving the caloric optimum than overnight doubling or tripling of customary intake.

#### ADDITIONAL CALORIES

For some patients this diet may be sufficient to bring about a weight gain; for others additional calories will be necessary.

One of the easiest (and least expensive) ways to increase calories is by the addition of skim milk powder. One cup of skim milk powder adds 435 calories (and 45 gm. of protein) to the diet. *This cup of skim milk powder can be incorporated into the daily milk allowance (3 1/2 cups) to form a basic mix* which contains about

TABLE III  
Basic Mixes for Caloric Increases

Mix	Approximate Calories	Approximate Protein (gm.)
3 1/2 cups whole milk plus 1 cup skim milk powder	1,000	75
3 1/2 cups half milk and half light cream plus 1 cup skim milk powder . . . . .	1,590	70
3 1/2 cups light cream plus 1 cup skim milk powder	2,055	56

TABLE IV  
Additions to Basic Mixes for Caloric Increases

Item(s) Added	Approximate Caloric Increase
1 egg plus 1 teaspoon sugar . . . . .	95
1 tablespoon molasses . . . . .	50
1/4 cup fruit nectar . . . . .	60
1/4 cup strained sweetened fruit . . . . .	40
2 tablespoons chocolate syrup . . . . .	80
1 brick (8/ quart) ice cream (flavor as preferred) . . . . .	150
1 brick (8/ quart) vanilla ice cream plus any of the above . . . . .	190-185
Vanilla, rum, maple or peppermint extract . . . . .	...
Grated orange rind, cold brewed or instant coffee powder . . . . .	...

1,000 calories and 75 gm. of protein. Using cream or half milk and half cream for the base can bring about an even greater caloric increase (Table III).

This basic mix can be used in preparing soups (homemade and reconstituted canned, frozen or dried soups), casseroles, puddings, custards, baked goods, in hot beverages and on cereal. It can be used in many recipes calling for milk. Mixed in advance and served very cold, it can be drunk as a fortified milk or can serve as the base for numerous milk beverages. The addition of any of the ingredients listed in Table IV to one cup (or more or less) of this basic mix will further increase the calories as noted.

Additional foods may be eaten as long as they do not interfere with the intake of the basic foods. Nuts, peanut butter, potato chips, dips, hors d'oeuvres, additional desserts and

other favorites of the individual may be very helpful in increasing the caloric intake of a person with a jaded appetite.

#### REFERENCES

1. ROBINSON, C. H. Food therapy begins with the normal diet. *J. Clin. Nutrition*, 1: 150, 1953.
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