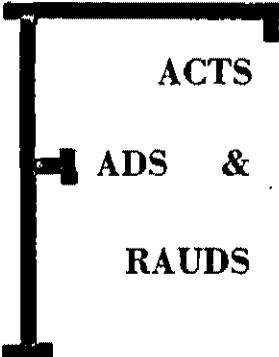


Facts, Fads and Frauds
in Nutrition.

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ACTS
ADS &
RAUDS IN NUTRITION

By Helen S. Mitchell and Gladys M. Cook

Present-day food advertisements make a tremendous appeal to a nutrition-conscious public which has only a very limited basis for evaluating the merits of the claims made. This bulletin is intended to serve as a guide to the consumer.

MASSACHUSETTS STATE COLLEGE
AMHERST, MASS.

CONTENTS

	Page
Purpose and scope of this bulletin	3
Food advertising	4
1. The proper type	4
2. Trick claims	4
3. Misleading testimonials or clinical reports	5
4. Educational versus pseudo-educational advertising	5
Vague health claims	6
1. Health foods	6
2. Balanced foods	7
3. Food concentrates	7
4. Energy foods (cereals, candies, and fruit juices)	7
Weight reduction	9
1. Metabolic stimulants for reducing	9
(a) Thyroid products	9
(b) Dinitrophenol products	10
2. Laxative salts and drugs for reducing	10
(a) Laxative salts	10
(b) Cathartic drugs	11
3. Specific foods or food concentrates for reducing	12
(a) Proprietary food concentrates for reducing	12
(b) Reducing claims made for common foods	12
Laxative foods	12
1. Proprietary foods containing cathartic drugs	13
2. The laxative value of foods containing cellulose or other forms of bulk	13
Aids to digestion and predigested foods	13
Mineral foods	14
1. Legitimate mineral claims	14
2. Mineral deficiencies	14
3. Organic vs. inorganic minerals	14
4. Acidosis	14
5. Iron	15
6. Iodine	15
7. Extravagant mineral claims	16
Vitamin claims in advertising	17
1. General vitamin claims — unwarranted	17
2. Specific vitamin claims may be legitimate	18
Food combinations	20
Disease cures and false therapeutic claims for foods	21
1. Acid stomach	21
2. Diabetes	21
3. Arthritis	22
4. Fasting cures	23
Therapeutic claims for mineral or spring waters	23
The quacks and how they operate	24
Food legends	26
Scientific opinions on food fads and quackery	29
1. Articles	29
2. Books	30
3. Sources of information	30
Reference books on nutrition	31

FACTS, FADS AND FRAUDS IN NUTRITION

By Helen S. Mitchell, Research Professor,
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PURPOSE AND SCOPE OF THIS BULLETIN

Material presented in this bulletin is not the result of original investigations by the authors but a summarization of information, decisions, and criticisms by recognized authorities concerning nutritional and therapeutic claims in food advertising as well as faulty concepts and notions regarding foods and nutrition. Most informative material along this line is published in journals or bulletins not readily available to the layman and consumer.

This publication attempts to present this information in brief and readable form so that the layman may answer for himself questions regarding extravagant, misleading food and nutrition propaganda. At the present time there is no adequate legal censorship of radio, newspaper, or pamphlet advertising. The United States Food and Drug Administration, the Postal Authorities, and the Federal Trade Commission may do all they can under the present laws to protect people against deceptively labeled foods, but they have little jurisdiction over advertising not attached to the product. It therefore behooves the consumer to develop a reasonable degree of skepticism as well as sales resistance in respect to extravagantly advertised health foods and fake nutritional claims. Intelligent skepticism must be backed by fundamental facts, however, because it is all too easy for the layman aroused by scare propaganda to go to the opposite extreme and doubt everything he reads or hears. It is quite impossible to include in a brief publication such as this bulletin specific answers to all questions which may arise or a complete list of false notions, food fads, fakes and fakers. A few of the more striking and popular misconceptions are considered, with specific names of products given only when federal or other reliable agencies have previously published their judgment or criticism. Some of the products may be off the market by the time this bulletin is published, but the general earmarks of false or misleading advertising will, however, become familiar to the reader and be easily recognized in the future. A rough classification of material presented has been attempted for the convenience of the reader. Footnote references may be consulted for authority on statements made or products mentioned. A brief comment regarding a proper scientific concept or definition of terms used introduces each subdivision of subject matter.

The Council on Foods of the American Medical Association publishes from time to time in the *Journal of the American Medical Association* *General Decisions* which have been adopted for its own guidance and that of the public, food manufacturers, and advertising agencies. These decisions are revised periodically as scientific progress warrants and are published in convenient

*Acknowledgment with thanks is made to Ruth deForest Lamb, Chief Educational Officer, Food and Drug Administration, U.S.D.A., who has read the manuscript and offered valuable suggestions.

booklet form¹. The intelligent consumer should be familiar with scientific opinion on this subject because many foods and remedies on the market do not conform to ethical standards in advertising nor are there adequate laws which can compel them to do so. Quotations from publications of the American Medical Association and the Food and Drug Administration are given in this bulletin to represent accepted scientific opinion and decisions on various moot questions regarding food advertising and therapeutic claims.

FOOD ADVERTISING IN GENERAL

Legitimate and reliable advertising of food products is of real service to the public and deserves encouragement on this basis alone aside from its necessity for successful competition in the commercial field. The intelligent consumer welcomes reliable information but should be disgusted with extravaganza and misstatement. Many of the false notions and misapprehensions regarding the magic health value of certain foods and the mysterious dangers in specific food combinations have been introduced or initiated by unscrupulous advertisers or propagandists. The Council on Foods define their idea of good advertising and caution against certain abuses as follows:

1. THE PROPER TYPE¹

Proper food advertising should use the common name of the food concerned, or in the case of a fanciful trade name should identify the ingredients in the order of their decreasing proportions in the product. Such practice prevents deception. Any statement of the physical, chemical, nutritional or physiologic properties and values of the food should be truthful and expressed in simple common terms. Proper advertising is free from false implications. It does not create incorrect or improper inferences or comparisons between foods. It attempts to promote sales solely on the merits of the food article itself.

Good food advertising harmonizes with established authoritative knowledge popularly expressed. Meritorious foods require no exaggerated, false, or misleading claims. The inferior food with alleged fictitious values requires gross superlatives and exaggerations, and flamboyant, vague and mysterious claims. Good advertising discusses nutritional values but avoids specific health claims; it recognizes that health depends on the diet as a whole and on many factors other than foods and not on any one food brand nor any one type of food.

Statements or claims in food advertising with technical, scientific, nutritional, physiologic or *health* significance shall be carefully phrased so as to be in complete accord with established knowledge and authoritative opinion, and shall be free from misleading or incorrect popular implications or interpretations.

2. TRICK CLAIMS

The average reader of advertisements is not critical of the exact wording but is satisfied to gain a general impression of the product in question. The quack of former days was so crude in his statements that the modern consumer wonders how people could have ever believed such buncombe. Even today it is easy to detect flagrant quackery, but the more *scientific* modern quack or the unscrupulous advertiser may couch his remarks in such technical language as to give false confidence to the reader. Writers of advertising copy count on the casual reading to carry false impressions without actually making false statements. Numerous instances of such misleading wording can easily be detected by the observant reader.

¹ General Decisions on Foods and Food Advertising
Council on Foods. American Medical Association, July, 1936.

Watch for such statements as those implying merits for the product advertised, when in reality the food with which the product is to be used contributes the major value to the combination. Thus, one advertisement reads: "Combined with milk this single drink gives you many health benefits . . . builds sturdy bodies from teeth to toes . . . generating body warmth, energy, strength and weight." An extravagant statement at best, but based chiefly upon the value of milk.

3. MISLEADING TESTIMONIALS OR CLINICAL REPORTS

Health testimonials are an all too common form of food advertising and are especially deceptive when given by people unqualified to express a scientific opinion. An academic title of Doctor or M.D. used in advertisements or testimonials is no assurance of their authoritative nature but is an unethical device often used by quacks and fakers. It is often implied or stated that a product is approved or recommended by *physicians, health authorities, nurses, dietitians, or hospitals* when such is not actually the case. Beware of extravagant testimonial endorsements and general *health* claims.

4. EDUCATIONAL VERSUS PSEUDO-EDUCATIONAL ADVERTISING

Many of the larger food companies today are putting out valuable educational material which is welcomed by teachers of foods and nutrition. Charts, posters, and pamphlets suitable for use in the classroom are to be encouraged if they give reliable information in convenient form. Educational advertising should properly evaluate foods with respect to those common on the market and to the requirements of an adequate diet.

Some so-called educational food advertising presents pseudo-scientific information on the nutritional or physiologic values of foods in an artfully misleading and insidiously deceptive manner. Exaggeration or implication that all the nutritive values reside in a single food or any undue emphasis on the nutritional or physiologic values of any one food is a form of deception.

When analytical statements are given on labels or in advertising, they should be expressed in such a way as to allow of correct scientific and popular interpretation. Traces of elements present in insignificant amounts should not be given prominence. On the other hand, it is proper to list the important constituents and state their nutritional significance or unique physiological properties if there is sufficient scientific evidence to warrant it. The consumer has a right to know what nutritional contribution a given food may make to a complete or therapeutic diet. *Special purpose foods* have a place when they contribute some nutrient essential or property not easily secured in common foods. Instances of special purpose foods are mentioned later in this bulletin.

VAGUE HEALTH CLAIMS

The layman should beware of so-called *health foods*, *perfectly balanced foods*, *scientific food concentrates* and other food products for which the makers claim curative or health-giving properties.

1. HEALTH FOODS

The Food and Drug Administration believes that — ¹

... the use of the word *health* in connection with foods constitutes a misbranding under the Food and Drugs Act. The use of this word implies that these products have health-giving or curative properties, when, in general, they merely possess some of the nutritive qualities to be expected in any wholesome food product. The label claims on these products are such that the consumer is led to believe that our ordinary diet is sorely deficient in such vital substances as vitamins and minerals, and that these so-called *health foods* are absolutely necessary to conserve life and health.

The Food Law officials do not object to calling these products *wholesome* provided they are wholesome, but the effort to give the impression that we all need something added to our every-day diet if we are to avoid nutritional disaster is a misrepresentation which these authorities aim to combat.

The Council on Foods is even more explicit in defining the proper use of the terms *health*, *healthful*, and *wholesome*.¹

The term *health food* and equivalent claims or statements to the effect that a food gives or assures *health* are vague, misinformative and misleading. An adequate or complete diet and the recognized nutritional essentials established by the science of nutrition are necessary for health, but health depends on many other factors than those provided by such diet or nutritional essentials. No one food is essential for health; there are no *health foods*. Statements of well-established nutritional or physiologic values of foods are permissible.

The term *healthful* is frequently encountered in food advertising. As used, it commonly means that the food described corrects a possible nutritive deficiency or some abnormal condition in such a manner as actively to improve health. It incorrectly implies that the food possesses unique (or unusual) health-giving properties. The term has a popular specific *health food* significance which makes its use in advertising misinformative and misleading.

Healthful and *wholesome* by dictionary definition have almost identical meanings; the former, however, intimates an active significance, whereas, the latter signifies quality or condition. *Wholesome* indicates that a food so described is sound, clean, fit for consumption, and free of any objectionable qualities; it is appropriate for characterizing foods fulfilling these qualifications and should replace *healthful* as used in food advertising.

The same unwarranted claims made for patent medicines a few decades ago are made today by the manufacturers of "Health Foods." Weird concoctions of ground alfalfa or dried vegetables, inorganic salts, and flavoring are foisted on the unfortunate public as panaceas for every conceivable ailment, real or imaginary. As one commentator has said, "The ignorance of nutrition displayed by such promoters is equaled only by the extravagance of their claims."² One wonders whether such ignorance is sincere.

A single product may be recommended both for gaining and reducing weight,

¹ Reference 1 on page 4.

² Press Service. U.S.D.A. May 22, 1929.

³ Council on Foods. J.A.M.A. 108, 47, 1937.

while at the same time it claims to "improve the complexion, feed the nerves, benefit teeth and bone development, build up blood, aid digestion." A certain beverage to be made with milk proclaims this *health* news: "is a builder of strong bodies, keen minds . . . steady nerves . . . essential in everyday life . . . a balanced food."⁴ A so-called "cream bread" claims to be a "*health food* . . . because it is healthful. . . . It's the pure health-giving ingredients in every loaf that gives you the vitamins necessary to develop healthy bodies."⁵ An example of many words which say nothing but influence many.

The Food and Drug Administration has published notices of judgment against several products making unwarranted *health* claims.

Catalyn (N.J. 21213)

Instant Alberty's Foods (N.J. 21210 and 24528)

Nature's Vital Food (N.J. 25116)

Owmen's Viti-Veg (N.J. 24963)

2. BALANCED FOODS

Vague *health* claims are frequently accompanied by the equally vague use of the term "scientifically balanced" or "balanced foods." No one food is expected to be taken alone or constitute a complete diet. When added to a mixed diet which may be good or poor, no one food can insure that the diet will become *balanced*. Beware of products advertising a "balanced composition."

One current radio advertiser unhesitatingly reiterates: "The including of ——— bread and baked goods in your menus assures well-balanced meals for every member of the family." Added to a meal consisting of other cereal products or starchy foods, even the best bread would detract from the nutritional balance of the meal, and certainly no "assurance" could be placed in bread as a "balancing" item in meal planning.

3. FOOD CONCENTRATES

The term *food concentrates* is to be distinguished from the term *concentrate* as applied to concentrated preparations of vitamins, flavorings, fruit juices, etc. Dehydration is a form of concentration and to that extent dried foods or milk powders may be considered concentrates, but that is not the usual use of the term.

Promoters of food mixtures consisting mainly of sucrose, malt extract, cocoa, and dried milk are prone to lay undue emphasis on the *scientific food concentrate* idea. These products are frequently wholesome and palatable and make an agreeable beverage but should not be relied upon for therapeutic purposes. Usually they are relatively expensive and no more nourishing than a home-made chocolate milk drink. They are not true concentrates.

The more erroneous use of the term *food concentrate* is its application to proprietary concoctions such as mineral mixtures, dried alfalfa, kelp, etc., which products are discussed later under *Mineral Foods*.

4. ENERGY FOODS

The misuse of the term *energy* is experiencing a wave of popularity among advertisers of cereal, candy, and other carbohydrate foods. The Council on Foods explain their stand on this question as follows:¹

¹ Reference 1 on page 4.

⁴ Committee on Foods. J.A.M.A. 105, 120, 1935.

⁵ Committee on Foods. J.A.M.A. 105, 599, 1935.

All foods except the simple mineral foods and water contain chemical energy available for use by the healthy body to support the many activities and life processes and incidentally to maintain temperature. The use of the term *energy* in defining the caloric energy value of foods should not be confused with the popular usage signifying activity, vitality, strength, vigor, or endurance. These conditions depend upon many factors, including freedom from disease, natural constitution, physical environment, training, habits, and others. Good nutritive condition, a necessity for health, requires far more than food energy only; all the nutritional essentials of a complete, well balanced diet, in adequate amounts, are demanded.

Food advertising should correctly inform the public of the energy values of foods in carefully chosen terms that may be properly interpreted. The distinction between the caloric and popular senses of the word *energy* must be recognized and observed."

Some perfectly wholesome foods such as cereals have been widely advertised as perfectly *balanced* or *health-giving* or *energy* foods. The criticism of the advertising is not a criticism of the food as such, but of the misleading and extravagant statements made.

(a) **Cereals.** Some of the leading brands of our best cereals use such phrases as "a health food," "a richer source of energy," "double rich," "can do more for your child than any ordinary cereal," "keeps appetite normally eager," "richer in growth factors than any other cereal."¹ A current radio program claims that a certain bread "will put your youngster across the line between *good health* and *energetic vitality*." Another cereal² carries even more startling assertions: "a perfectly balanced food . . . an aid to digestion of other foods . . . required for maintaining a high degree of health and vitality."

The trick wording and unwarranted claims are easily recognized. No cereal can be a "perfectly balanced" food nor "aid digestion of other foods." All cereals are good sources of calories and provide a moderate amount of protein. Whole-grain cereals provide certain minerals and vitamin B more than refined cereals. The difference in nutritive value between the different brands of the same cereal are insignificant except as to flavor and texture, which is a matter of choice.

(b) **Candies.** Certain candies have also indulged in *energy* claims to impress the public. Most candies have little to offer but calories. They are notably lacking in protein, minerals, and vitamins but they capitalize the caloric value of sugar as "a cheap source of energy," "concentrated energy for physical exercise." A five-cent candy bar advertised to school children as giving them more *energy* for their money than a wholesome five-cent item at the school lunch counter thwarts many an attempt to educate our young people in good food habits. The consumer must read between the lines if he is not to be misled by such statements.

(c) **Fruit Juices.** One widely advertised fruit juice also uses an *energy* story while another is emphasizing the *low caloric* (energy) content as an aid to reducing. Which is true? The one which says "quick energy breakfast . . . supplies morning energy" and neglects to state the large volume of fruit juice which would be necessary as an adequate source of *energy*, or the other whose reducing claims fail to inform the consumer that a reduction in total caloric intake is the all-important issue and that the juice in question may merely serve as one low calorie substitute.

¹ Committee on Foods. J.A.M.A. 104, 922, 1935.

² Food and Drug Administration. N.J. 25851.

³ Committee on Foods. J.A.M.A. 101, 1229, 1933.

WEIGHT REDUCTION

The question of body weight is of general interest today. Not only has fashion decreed the slender figure, but life insurance figures show that excessive overweight reduces life expectancy. The medical profession recognizes the dangers of obesity and recommends safe and sane methods of weight control. Physicians are emphatic, however, in their warnings against indiscriminate weight reduction or the promiscuous use of commercial nostrums for this purpose.

Individuals showing a tendency to obesity fail to realize how small a quantity of food can influence weight. An intake of 100 calories (five teaspoons of sugar or one tablespoon of butter) a day above the energy expenditure may mean an increase in weight of 10 pounds in a year in persons inclined to obesity. The caloric intake must be lowered below the actual daily needs if the body is to draw upon its reserve supply of body fat. But restriction of energy intake must be accomplished without reduction of other dietary essentials. The intake of protein, minerals, and vitamins should be higher in proportion as the caloric intake is reduced. It is possible to plan such a diet which will be palatable and protect against the dangers of undernutrition without resorting to expensive dietary supplements or dangerous reducing nostrums. Intelligent people have already become skeptical of quack reducing remedies as is evidenced by lessening sales, but there are some who still need to be cautioned.

There are *three types* of reducing regimes which are or have been popular and should be recognized in their true light by the layman. The *true metabolic stimulants* are the most dangerous, the *laxative salts and drugs* are futile and often harmful, the *food supplements with recommended dietary regimes* are usually harmless but may be fraudulent in their therapeutic claims.

1. METABOLIC STIMULANTS FOR REDUCING

(a) **Thyroid Products.** Less than 5 percent of obese people have a true pathological obesity due to thyroid deficiency. Such cases are treated by thyroid extract carefully administered by a physician, guided by repeated examinations. Most cases of obesity due to overindulgence in food and too little exercise should not, however, be treated in this manner. Quack obesity cures are apt to contain potent drugs which are known to increase the rate of metabolism and thus burn up stored body fat and other tissues. The overweights are usually told that it is unnecessary to diet or exercise and that the product is *harmless* and will *improve* health. Serious and even fatal results have often been the outcome of such self-treatment for obesity.

A certain desiccated thyroid preparation marketed under a trade name has been on the market for over twenty-five years. It has repeatedly been on the docket of the Federal Trade Commission. The last action, taken as recently as January 1937, ordered the promoters to "cease and desist" from six different types of misrepresentation which are employed in their advertising. They were criticised for such misleading statements or misrepresentations as the following:⁹

* Federal Trade Commission. January 21, 1937. Docket No. 2406.

"That thyroid deficiency is a common cause or the usual cause of obesity.

"That all modern physicians use thyroid in the treatment of obesity.

"That _____ or thyroid is the remedy indicated in and the best suited for the treatment of obesity.

"That _____ or thyroid feeds the thyroid gland or stimulates or restores it to normal action.

"That any weight in excess of the average weight is due to excess fat and that such persons should reduce and should effect the reduction by taking _____."

Reducing nostrums containing thyroid substance have been sold under a variety of trade names. These may state on the label in small and inconspicuous print that they contain thyroid substance. The newspaper or radio advertising of the same product may omit this valuable information and make far more extravagant claims as to its virtues for reducing. Label information is likely to be more conservative because the law has more teeth in enforcing reliability in labeling than in advertising. In spite of claims to the contrary, the advertising fails to disclose the potent and dangerous properties of desiccated thyroid and the necessary precautions for its use.

(b) **Dinitrophenol Products.** The drug *dinitrophenol* also increases the metabolic rate and causes a loss of weight but it is known to have an insidious and cumulative effect causing, in some people, vague and ill-defined symptoms, in others, a specific injury to the lens of the eye resulting in rapid cataract formation. There is no law to control the sale of products containing this drug but recent publicity regarding the dangers accompanying its use have materially reduced sales of such products. Reliable druggists realize the hazards of the promiscuous sale of such a drug and advise against its use. A list of trade-named products containing *dinitrophenol*¹⁰ as an active ingredient follows:

Dinitrole	Nitra-Phen
Dinitrolac	Nitromet
Dinitronal	Nox-Ben-Ol
Dinitriso	Prescription No. 17
Dinitrose	Redusols ¹¹
Formula 281	Slim (N.J. 25042 and 25850)
	Tabolin

2. LAXATIVE SALTS AND DRUGS FOR REDUCING

(a) **Laxative Salts.** Common laxative salts sold under a variety of fancy trade names, or laxative drugs sold as harmless remedies, or hidden in so-called *reducing foods*, all accomplish similar results — the loss of large volumes of water through the stools. The sudden weight reduction is due to loss of *water*, not *fat*, and both the water and the resulting weight will be promptly regained as soon as water is consumed. Furthermore, permanent injury to the intestine and digestive function may result from the repeated use of such drastic treatment. Proper laxative agents have their place in medical practice, but not as *obesity cures*.

Extravagant and ridiculous claims regarding the therapeutic value of such products are made in the advertising literature offered to the laymen. The laxative *reducing* salts are usually mixtures of some of the following: Glauber's salt, Epsom salt, baking or washing soda, table salt, potassium chloride, tar-

¹⁰ Current Comment. J.A.M.A. 105, 804, 1935.

¹¹ Bur. Inv. J.A.M.A. 106, 1587, 1936.

taric or citric acid. One such popularly advertised product claimed to be a "superb combination of six separate mineral salts which help glands, nerves and body organs to function properly. . . . it strikes at the usual CAUSE of fat." This same nostrum was advertised in the British Isles as a producer of "vim, vigor and vitality" for men, but when it came to the U. S. A. it became an obesity cure for women. Another similar product advertises: "Now if you are fat you can eat your fill and yet grow thin . . . by the new —— method of reducing. You can lose as much as seven full pounds the first week and look pounds lighter from the first day."¹³ "—— is urged as a poison-banishing agent . . . to *eliminate body moisture* and unhealthy bloating . . . not as a reducing one." Still another offers false encouragement with vague medical endorsement. "Now you can reduce 2 to 4 lbs. in a night . . . eat what you please . . . Excess weight has been removed, skin more lovely, bodies more shapely and minds brighter. . . . Your physician will tell you that —— is certain to do the work and is absolutely harmless. . . . —— will help your body throw off worn out fat and bodily poisons."

The Food and Drug Administration has taken action against two such products, Dieto (N.J. 22669) and Sleepy Salts (N.J. 21537). They severely censure such statements as "eat big meals, yet see the inches melt away" and "how to lose fat quickly, without drugs, without starving and no violent exercise." There are many other similar products being advertised over the radio and in the press which deserve equally severe censure.

(b) **Cathartic Drugs.** Laxative or cathartic drugs have much the same physiological action as the laxative salts. The ones most commonly employed in reducing nostrums are phenolphthalein, cascara, senna, and licorice.

The Post Office Department has issued a fraud order against Snyders Reducing Products sold as Snyders Anti-Fat Tablets.¹⁴ The government analysis found this product to contain 85 percent chalk, 4.8 percent common salt, and $\frac{1}{8}$ grain of phenolphthalein per tablet, with traces of other material. The advertising, which was accompanied by a picture of a slender girl in a bathing suit, reads: "I reduced 70 lbs. . . . Many women report the loss of as much as five pounds in *one week*, safely without drugs, dopes or chemicals, without strenuous exercise or dieting. —— are Safe, Harmless, Effective. . . . does not leave a flabby skin. . . . A Triumph of Medical and Pharmaceutical Science."

Re-Duso and Berner's Tablets, sold by Re-Duso Sales Co. and Berner Sales, were barred from U. S. Mails July 8, 1936,¹⁴ for engaging in a scheme for obtaining money under false and fraudulent pretenses. These tablets contain cascara as one of the active ingredients. They claim to ". . . eliminate excess fat by reducing the appetite and giving a very gentle and mild laxative action, causing the most natural elimination of excess fat and waste matter accumulated in the system." They "simply offer you an economical way to do what modern doctors do in treatment of obesity . . ."

Various other reducing remedies have been criticised or condemned by authorities only to be replaced by similar products under new names to deceive the unwary victim. An amusing and informative article on the subject of obesity cures is recommended for those interested.¹⁵

¹³ Cramp, A. J. Hygeia, January 1935, page 50.

¹⁴ Bur. Inv. J.A.M.A. 107, 370, 1936.

¹⁵ Bur. Inv. J.A.M.A. 107, 1405, 1936.

3. SPECIFIC FOODS OR FOOD CONCENTRATES FOR REDUCING

A third type of obesity treatment bases its entire success upon the dietary regime recommended, which, in some cases, may be quite satisfactory. The food or food concentrate offered is not essential to the reducing program outlined.

(a) **Proprietary Food Concentrates for Reducing.** Many of these so-called *food concentrates* or *powders* consist of dry milk, cocoa, starch, dextrine, sugar, soya bean flour, and salt. All of these are harmless ingredients but none could possibly produce the reduction in weight claimed by the advertisers. Unwarranted therapeutic or curative claims as well as false statements regarding the mineral and vitamin content of such products are common offenses. The Food and Drug Administration has issued notices of judgment against certain widely advertised reducing systems.

Dietene (N.J. 24069 and 24527)

Stardom's Health Diet (N.J. 24519 and 25828)

Stoll's Diet-Aid (N.J. 23271)

Syl-Vette (N.J. 21746)

(b) **Reducing Claims Made for Common Foods.** Fruit juices, candies, and other common foods are recommended from time to time by promoters as specific aids to reducing. Some have no place in a reducing diet, others are truly low caloric foods which may logically constitute a part of a sane reducing regime. If these foods are accepted as agreeable adjuncts to a low caloric diet without false confidence in their reducing powers, no harm is done by using them. The advertisements leave the impression, however, that the food in question exerts a positive effect in promoting weight loss. From this standpoint only is the current advertising criticised; they are still wholesome foods to be used freely by all who like them. The consumer is warned, however, against such pseudo-scientific statements as ¹⁵ ¹⁶ "Yields quick energy" but is "never fattening," "Modern science discovers ——— burns up fat," "simple sugars are quickly absorbed and used and hence not stored as fat."

A wholesome cereal product has recently promoted a radio advertising campaign in which the slender figure of certain movie stars is the major appeal. The food has no specific reducing properties and is itself a carbohydrate food. Such advertising is grossly misleading and destroys confidence in food advertising in general.¹⁷

LAXATIVE FOODS

The control of chronic constipation is commonly attempted by self-medication. This practice can be neither condemned nor endorsed without knowing the cases in question. No attempt will be made here to discuss the relative merits of laxative or cathartic drugs. There are certain principles that should be understood, however, regarding the so-called *laxative foods* which are on the market. In general, they fall into two classes — those foods to which a cathartic drug has been added, and those which provide cellulose or some other form of bulk.

¹⁵ Council on Foods. J.A.M.A. 107, 660, 1936.

¹⁶ Committee on Foods. J.A.M.A. 102, 292, 1934.

¹⁷ Committee on Foods. J.A.M.A. 105, 1773, 1935.

1. PROPRIETARY FOODS CONTAINING CATHARTIC DRUGS

The Food and Drug Administration regards phenolphthalein or any other such laxative drug as an adulterant when it is used as an ingredient of a food. They say that "a powerful coal-tar cathartic has no proper place in bread or any other product sold as a food." In this respect Owen's Original Laxative Health Bread, Viti-Veg, has been criticised by the Food and Drug Administration (N.J. 25587) as well as by medical authorities.^{1*}

2. THE LAXATIVE VALUE OF FOODS CONTAINING CELLULOSE OR OTHER FORMS OF BULK

Constipation due to stagnation or lack of bulk will frequently yield to regular habits and ample roughage. On the other hand, constipation may be due to causes other than those of dietary or roughage origin. Medical authorities^{1*} advise that cases of constipation not yielding to the regular use of foods providing considerable roughage should be under the care of a competent physician.

The laxative value of wheat bran is due to its fiber content. Any whole-grain cereal, vegetable, or fruit containing cellulose may contribute the necessary bulk to the diet — the latter being less irritating than bran.

Several varieties of prepared bran or bran cereals on the market have been criticised for too sweeping statements made regarding their laxative value.^{20, 21} Some people following the advice of such advertising have ingested more fiber or cellulose than their systems could tolerate and the resulting injury has brought condemnation to bran. Bran is not a cure-all but it may be used in moderation by those who need additional bulk in their diet. Scientific observations on the laxative action of bran may be consulted for more detailed information.^{22, 23}

AIDS TO DIGESTION AND PREDIGESTED FOODS

Foods which are easily digested cannot be said to aid in the digestion of other foods. *Partially digested* or *predigested foods* are of questionable value because the carbohydrate ingredient is the one usually concerned in such proprietary products and this very carbohydrate portion of our food is the least likely to need *predigesting*. Claims regarding *aids to digestion*, or *natural digestive elements* are also unwarranted.

The normal person is able to digest the constituents of common foods unaided by artificial means. Any child or adult can digest starch. Saliva swallowed with the food is more potent for digesting starch than any food containing malt or malt extract. Foods containing diastase do not aid in the "digestion of other foods" and have no action whatever on proteins and fats.

Beware of products claiming to be "predigested" or "aids to digestion." The misleading statements are easily recognized when one knows the earmarks²⁴ — "a special food property that has the power to aid in the digestion of starch foods," "increases digestibility," "a predigested complete food," "especially good for growing children."

^{1*} Committee on Foods. J.A.M.A. 104, 1708, 1935.

²⁰ Council on Foods. J.A.M.A. 107, 874, 1936.

²¹ Committee on Foods. J.A.M.A. 104, 1604, 1935.

²² Council on Foods. J.A.M.A. 107, 1303, 1936.

²³ Cowgill, G. R., et al. J.A.M.A. 98, 1866, 1932; 100, 795, 1933.

²⁴ Rose, M. S., et al. Jour. Amer. Diet. Ass. 8, 133, 1932.

²⁵ Committee on Foods. J.A.M.A. 97, 1798, 1931; 106, 120, 1270, 1271, 1935.

MINERAL FOODS

Recent research work on the mineral requirements for normal nutrition has added greatly to our fund of knowledge in this field. A study of the numerous functions of the various minerals in the animal body would be a maze to the uninitiated. But the quacks and unscrupulous advertisers would make it still more complicated by unwarranted statements regarding the *health-giving* and *therapeutic* value of minerals. Many of these advertising statements are vague and nonspecific, signifying or implying the presence of *all* the nutritionally valuable minerals in a single product. Such vague statements are not informative and are misleading.

1. LEGITIMATE MINERAL CLAIMS

Mineral claims made for any food should specify the individual element or elements present in nutritionally significant amounts. Minerals present only in traces in the amounts of food likely to be consumed in the diet do not warrant mention.

2. MINERAL DEFICIENCIES

Some advertisers not only make sweeping statements regarding the mineral content of the product but lead the reader to believe that the average individual is suffering from *serious mineral deficiencies* which can be made good only by the proprietary remedy or the food advertised. Smatterings of facts are intermingled with falsehood giving the entire copy a semblance of truth.

3. ORGANIC VS. INORGANIC MINERALS

There is no scientific basis for maintaining in general that *organic* mineral compounds are better than *inorganic*. In some cases the facts are quite the reverse. The quack tries to impress the public with repeated reference to *organic minerals* when in reality most of the mineral elements present in these proprietary compounds are inorganic. The availability of a mineral for animal nutrition is not dependent upon the organic vs. inorganic state but upon solubility and other chemical factors still under investigation.

There is no scientific conservatism in such quack statements as "Lack of food minerals in the diet in proper form . . . result in obesity, goitre, rickets, nervousness, anemia, eczema, asthma, rheumatism, neuritis, arthritis, and many female troubles." "Guaranteed to contain all essential minerals." "Minerals . . . necessary to maintain intelligence."

4. ACIDOSIS

Acidosis is always prominent among the dangers listed as resulting from mineral deficiencies. The quack uses the scare motive freely in discussing the dire consequences of an "acid system" and its widespread occurrence. Actually acidosis is a rather rare condition of the blood; it is not a common disease because the normal body has the necessary mechanism for disposing of excess acids and alkalis. There is little need for worrying if the diet is reasonably well balanced. Money spent in treating such imaginary ailments is usually wasted. When true acidosis does accompany some other disease, it is a problem for scientific management. Yet advertisements for these so-called mineral foods (most of which are not *foods* at all) use such unqualified and vague

comments as "organic mineral salts necessary for an alkaline balance," "neutralize acids found in most deficiency diseases." Notices of judgment have been published against the commercial products Kal (N.J. 24056) and Vegetrate (N.J. 25574) for just such unwarranted curative and therapeutic claims.

5. IRON

Iron for blood building is recognized as a human nutritional requirement not always adequately provided in the poorer type of the average American diet. The quack carries this concept still further and points out that most people suffer from an iron deficiency and that his product is absolutely necessary as a source of the proper type and amount of iron. The truth is that foods vary considerably in their iron content and in the proportion of iron which is available. Investigations still in progress are attempting to determine the availability of iron in our common foods.

The whole process of blood regeneration is complex, involving other factors than the iron content of the food. Nutritional anemia is a condition in which the blood is deficient in hemoglobin. It may be due to an inadequate diet, but pathologic conditions may also be involved. Anemia and blood regeneration is a problem requiring intelligent scientific treatment. Blood-building claims, therefore, should be excluded from popular food advertising and certainly not taken seriously by the consuming public.

6. IODINE

Iodine is a chemical element essential for normal nutrition. Simple goitre may develop in individuals living where food and water are deficient in iodine. The prevention of goitre in these areas by regularly administered iodine in some form is considered a nutritional problem, but treatment of a well-developed goitre requires a more professional approach.

(a) **Iodine Prophylaxis.** Iodine prophylaxis is conveniently accomplished by the addition of a definite amount of sodium or potassium iodide to common table salt (1 part in 5,000). Iodized salt is available in most groceries at no extra cost. The fortification of foods other than table salt with iodine or iodine compounds is not recommended by scientific authorities. The promiscuous addition of iodine to that naturally present in foods is unnecessary and may lead to excessive iodine intake and endanger health.

(b) **Exploitation of Iodine.** Iodine is popularly heralded in many proprietary and some natural food products as a general panacea for chronic human ailments. The therapeutic value of iodine may be more varied than science at present appreciates, but extravagant and vague claims are unwarranted.

Dried seaweed or kelp is an ingredient of many of these proprietary products. Kelp is rich in inorganic constituents among which iodine is conspicuous, but there is no scientific basis for attributing magic powers to kelp. Several kelp products have been declared false and fraudulent by the Food and Drug Administration because of such unwarranted therapeutic claims as "anti-infective, anti-sterility, life giving, growth promoting" and as cures for almost any disease one can name: constipation, stomach disorders, indigestion, nervousness, female troubles, neuritis, obesity, underweight, skin diseases, anemia, fatigue, goitre, headache, rickets, arthritis, kidney disorders, heart trouble, and many more. Sometimes the list is so long it needs to be given in

alphabetical order to assist the reader in finding his pet ailment. The Food and Drug Administration has issued notices of judgment against the following kelp or sea weed products for false therapeutic claims:

Hauser's Potassium Broth²⁵
 Kelp-A-Malt (N.J. 22338)
 Kelfood (N.J. 22601)
 Parkelp (N.J. 20911)
 Seavigor (N.J. 24085)
 Vegetrate (N.J. 23260 and 25574)

7. EXTRAVAGANT MINERAL CLAIMS

It is entertaining and enlightening to review a few of the extravagant claims which have been made for some of these so-called *mineral foods*. They claim to "banish all acid condition of the stomach," "purify the blood," "aid elimination," "restore every gland and organ in the body to perfect functioning," "remineralize your body." Usually exorbitant prices are charged for a cheap mixture of minerals, dried alfalfa, grains, etc., with numerous false or misleading therapeutic claims. One company gives an alphabetical list of over 200 diseases and conditions all of which may be relieved or cured by one of their 12 mineral foods.

Notices of judgment have been published against Burbank Tea (N.J. 21199 and Nature's Mineral Food (N.J. 25091); and other similar products ^{26, 27, 28} have been severely censured by the American Medical Association.

²⁵ Radio Service. U.S.D.A. April 13, 1936.

²⁶ Bur. Inv. J.A.M.A. 103, 1325, 1934.

²⁷ Committee on Foods. J.A.M.A. 104, 219, 1935.

²⁸ Bur. Inv. J.A.M.A. 104, 335, 1935.

VITAMIN CLAIMS IN ADVERTISING

Popular interest in vitamins may be partly the cause and partly the result of the extensive use of the vitamin appeal in advertising. The subject is nutritionally important and as such deserves attention from the consumer. Some of the agitation for an increased vitamin content of the daily diet is proper and beneficial. The use of more fruits, vegetables, and whole-grain products is encouraged as a means of increasing the intake of various vitamins. In fact there is no serious objection to the reasonable fortification of food products with vitamin concentrates or with natural foods rich in vitamins but, with few exceptions, there seems to be little necessity for such vitamin fortification. Nevertheless, advertisers tend to exploit the public by their *indefinite* and *general vitamin claims* for specific foods or food preparations. Such claims mean almost nothing unless the specific vitamin or vitamins are designated and unless the quantity of the factor present is significant.

The Council on Foods again finds it necessary to define a stand to be taken in the matter of vitamin advertising from which we quote:¹

It is desirable that warranted vitamin claims be expressed in appropriate terms indicative of the relative potency of the food as a source of the vitamins in the dietary schedule. Foods may be considered relatively as fair, good and excellent or rich sources of vitamins. Statements of vitamin unitage in numerical quantities per gram (and per ounce if desired), where established, are to be encouraged on container labels and in advertising. The type of unit used should be specified.

1. GENERAL VITAMIN CLAIMS — UNWARRANTED

The various and startling therapeutic values ascribed to some of these so-called *vitamin concentrates* should arouse skepticism among any but the most gullible. Some of the products contain only traces of certain vitamins, while the advertising copy implies the presence of all vitamins in concentrated form. Vitamins A and C were absent from one product advertised as containing all known vitamins, while several with similar claims contained no appreciable amounts of any vitamin. The "health giving vitamins," which could not be discovered at all in one product, were purported to "enrich the blood . . . strengthen the nerves . . . increase weight and energy . . . aid digestion . . . correct constipation . . . clear the skin," and in general "act as a tonic in . . . run down conditions."

There is no intention of belittling the nutritive value of vitamins; but such false propaganda as that just cited makes the layman skeptical of legitimate claims which will be mentioned later. Several proprietary products have been publicly censured for unwarranted or misleading claims made with regard to their general vitamin content. Some others not listed here are subject to similar criticism.

¹ Reference 1 on page 4.

Chocco-Yeast (N.J. 21282)
Dennos Food (N.J. 21177)
Earle's Palatable Hypo-Col Tablets (N.J. 22370)
Jo-Lova Tea (N.J. 22602)
Malvitose (N.J. 25050)
Normalettes (N.J. 21198)
Mastin's Vitamon Tablets (N.J. 24118)
Nu-Vita Yeast (N.J. 20903 and 21581)
Thor's Vitamin Compound (N.J. 21189)

2. SPECIFIC VITAMIN CLAIMS MAY BE LEGITIMATE

Some comment seems to be necessary regarding the *justified* and *ethical* claims which may be made regarding *specific* vitamins and the abuses encountered in lay advertising. Again space prohibits an exhaustive treatment of this subject but some of the questions most frequently asked will be considered.

(a) **Vitamin A.** Vitamin A, found abundantly in natural foods such as dairy products, green vegetables, carrots, etc., is necessary for normal growth and health but need not be sought in expensive proprietary food preparations. One of the terms recently applied to vitamin A is *anti-infective*, implying that it increases resistance to infection. While there is ground for believing that an adequate amount of vitamin A is essential for the normal functioning of the mucous membranes of the respiratory tract, there is no assurance that an additional supply of this factor will prevent infection. Resistance to disease in general depends upon other factors than diet or any one dietary essential. Thus advertisements claiming that vitamin A or any other vitamin will protect against colds or respiratory infections are misleading although not absolutely false.

(b) **Vitamin B Complex.** This term *vitamin B complex* has come to be applied to a group of vitamins not necessarily similar in composition but associated in natural distribution. Several distinct fractions are recognized by research workers but from the standpoint of practical human nutrition, not more than two fractions, B (B_1) and G (B_2), need to be considered. Both are essential for normal nutrition but are easily obtained from common foods in a well-balanced dietary. B (B_1) is widely distributed in whole grains and vegetables; while G (B_2) is abundant in dairy products, eggs, meats, and fish. Both are present in yeast, which fact has given rise to undue exploitation of yeast products.

It is true that brewers yeast may be richer in vitamins B and G than bakers yeast, but the fresh moist yeast, if taken in sufficient quantity, may have more laxative effect than the dry yeast. Any type of yeast or yeast extract or product containing these is considered as a *special purpose food* and should be advertised as such. Many promoters of yeast products make unwarranted therapeutic claims.

(c) **Vitamin C.** Recent progress in vitamin C research has stimulated both scientific and popular interest to the point where overemphasis has become a danger. Formerly fresh raw fruits and vegetables were the only sources of this vitamin. Now it has been produced in pure crystalline form which may be used to reinforce foods or pharmaceutical preparations. This possibility opens the door to exploitation and fraudulent claims by unscrupulous advertisers. Ordinarily a liberal supply of fresh fruits and vegetables will supply

the vitamin C requirement of a normal individual. If, as some scientific investigators indicate, there is need for temporary reinforcement with this vitamin in certain diseases, the physician may recommend a vitamin C concentrate produced by a reliable pharmaceutical concern. The consumer is warned to be skeptical of extravagant therapeutic claims for vitamin C preparations.

(d) **Vitamin D.** The relative lack of vitamin D in common foods and the possibility of the fortification of certain foods with this factor has become a matter of real concern to nutritionists and physicians. There is ample evidence that infants and young children, living in northern climates especially, need extra vitamin D. Older children and adults may also derive benefit from extra vitamin D. This factor may be supplied by one of several vitamin D pharmaceutical preparations — such as cod liver oil, halibut liver oil, or viosterol — produced by reliable concerns and accurately labeled as to unitage. Some children never receive any such supplement, however, and for this reason the fortification of certain foods with vitamin D may be desirable. The American Medical Association recently expressed the following opinion:²⁹

Of all the common foods available, milk is most suitable as a carrier of added vitamin D. Vitamin D is concerned with the utilization of calcium and phosphorus, of which milk is an excellent source.

The properties of vitamin D may be imparted to milk by irradiation of milk, by proper feeding of vitamin D preparations to cows and by the direct addition to milk of either natural or manufactured vitamin D concentrates.

Most of the vitamin D milk now being marketed by reliable dairies is produced by one of these methods and is an acceptable and convenient source of this factor. The promiscuous reinforcement of a variety of other foods with vitamin D seems to be unnecessary and undesirable according to the American Medical Association. Those interested in this subject will do well to read the more complete discussion recently published in the Journal of the American Medical Association.²⁹

(e) **Vitamin E.** There is no adequate scientific evidence demonstrating the role of vitamin E in human nutrition. Most of the experimental work with this vitamin has been done with rats and it is not even known that it applies to other animals. This vitamin is so widely distributed in common foods that it is even difficult to obtain a vitamin E deficient food mixture for experimental purposes. It is, therefore, evident that vitamin E reinforcement of the diet is both unnecessary and unwarranted and any product so advertised is to be regarded with skepticism.

(f) **Vitamin F (?)** A certain unsaturated fatty acid found widely distributed in common fats has been found essential for nutrition. Cosmetic manufacturers have adopted the term vitamin F for this substance but scientific authorities do not accept this nomenclature. Scientific research has demonstrated the need for this fatty acid in the *food* of a *rat* but evidence is lacking to prove its value in local *skin application for the human*. The Bureau of Investigation³⁰ has indulged in humorous satire in answering inquiries on the subject.

²⁹ Council on Foods. J.A.M.A. 108, 206, 1937.

³⁰ Bur. Inv. J.A.M.A. 108, 1279, 1937.

FOOD COMBINATIONS

A *Compatible Eating* fad, also known as the *Hay Diet*¹¹ ¹² is one of the more recent of several movements for diet reform promoted by enthusiasts and endorsed by thousands of unwary converts. There is no physiological foundation for the belief that the various constituents in natural foods cannot be digested satisfactorily when eaten together at one meal. Rehfuss¹³ has given us definite proof that proteins and carbohydrates are not incompatible, nor does an acid fruit interfere with the digestion of starch. Leporsky¹⁴ has demonstrated that a combination of meat and vegetables may stimulate a better flow of digestive juices than either one alone. None of the dire consequences predicted as a result of eating the *wrong* combination actually materializes in the experience of thousands who boldly disregard such *warnings*. Be skeptical of scare advertising and of extravagant claims for the cure of disease by such weird dietary notions. Persons who have tried one of these new systems of eating and who claim to have been helped thereby may unknowingly have made other drastic changes in their dietary habits. The possible benefit seemingly derived from any of these regimes may arise from the fact that the variety of foods eaten is an improvement over the previous diet — more fruits and vegetables perhaps — rather than the eating of them in a prescribed order or combination. An adequate balance of needed food elements including minerals and vitamins is the important thing. The major emphasis if not the actual facts expounded by most self-styled nutritionists is misleading and holds out false hopes to the sick and ailing.

If you would be better informed on the futility and unscientific nature of these food combination fads, two humorous but reliable discussions of the subject are recommended. ¹⁵¹⁶

¹¹ Bur. Inv. J.A.M.A. 100, 595, 1933.

¹² Current Comment. J.A.M.A. 104, 402, 1935.

¹³ Rehfuss, M. J.A.M.A. 108, 1600, 1934.

¹⁴ Leporsky, N. T. Jour. Diges. Dis. and Nut. 2, 638, December 1935.

¹⁵ Lieb, C. W. Hygeia, August 1936, page 683.

¹⁶ Rose, M. S., Jour. Amer. Diet. Ass. 8, 489, 1933.

DISEASE CURES AND FALSE THERAPEUTIC CLAIMS FOR FOODS

Perhaps the most dangerous of all food fads and quackery are those which claim to *cure* any or all of the list of diseases which are most puzzling to medical science; cancer, diabetes, arthritis, rheumatism, hypertension, arteriosclerosis, heart disease, and kidney troubles. Beware of any remedy advertised to cure these conditions. Medical science is spending millions in research on these diseases. Definite progress has been made and is being made and the public will benefit just as fast as this information can be put in the hands of reputable physicians. Valuable time and money are lost fooling around with quacks. In general, popular advertising dealing with the treatment of disease or the nutrition of the sick is considered scientifically unwise and undesirable. This practice promotes self-diagnosis and self-treatment for which the layman is not qualified, and thereby may endanger health and life.

1. ACID STOMACH

The *acid stomach* scare constitutes the quack advertising lingo for a number of digestive remedies and diet systems. The stomach is normally acid and necessarily so for adequate digestion of food. There is just as likely to be too little as too much acid in certain abnormal states, but careful diagnosis and medical advice is necessary in such cases. Yet the quack who encourages self-diagnosis and medication still persists in suggesting the *serious* results of *acid stomach* and offers "anti-acid," "relief of acid stomach," and "cures for acid indigestion."

2. DIABETES

There are a number of *diabetic remedies* or *treatments* which hold out false hope of cure to the diabetic patient. In addition, there are numerous products advertised as *diabetic foods* which are recommended as safe to be eaten by diabetics in any amounts.

(a) **Ethical Diabetic Treatment.** The diabetic patient whose disease is being controlled by diet or by diet and insulin under a physician's supervision should never relinquish this safe and reliable regime for any of the quack remedies advertised. Persons not under the care of a physician will find no short cut, cheap *cure* for diabetes among the advertised nostrums. The discovery of insulin and our present understanding of its use have taken the dread and hopelessness out of this disease although no real cure for diabetes is known to medical science. The story of diabetes and insulin is interestingly told in popular language by Joslin,³⁷ a recognized authority in this field.

(b) **Fraudulent Diabetic Cures.** The active campaign against diabetic nostrums waged by the American Medical Association^{38, 39} and the Federal agencies has made many of them short-lived but new ones are continually cropping up. Several such nostrums or treatments are listed and discussed by A. J. Cramp⁴⁰ in an article which is well worth reading. Some of these nostrums are nothing more than chopped-up wild carrot (Queen Ann's Lace) which is one of many diuretics sold as *diabetic cures*. Wild carrot is irritating to the kidney, resulting in an increased excretion of urine. The catch is that

³⁷ Joslin, E. P. *Hygeia*, January and February 1937, pages 37 and 168.

³⁸ *Bur. Inv. J.A.M.A.* 103, 1639, 1934.

³⁹ *Bur. Inv. J.A.M.A.* 108, 317, 1937.

⁴⁰ Cramp, A. J. *Hygeia*, October 1935, page 916.

the amount of sugar in any one specimen may be less because of the increased volume but the total sugar output for the day may be the same or actually increased. The spectacular testimonials which usually accompany such products are written either by the promoter himself or by some innocent victim whose death notice may have been published even before the *cure* testimonial appeared. The following phrases are characteristic of quack *diabetic cure* advertising: "Relief guaranteed," "Sugar free in 48 hours," "Sugar removed in easy nature's way," "Patients treat themselves," "Pleasant, easy, very successful." Notices of judgment have been published or other federal action has been taken against the following products:

Alberty's Anti-Diabetic Vegetable Compound (N.J. 21220)

Dia-Bet (N.J. 24660)

Diabeticine⁴¹

Diano for Diabetes (N.J. 20555)

Healthagain (a food medicine of vegetable origin) (N.J. 22025)

Warner's Safe Diabetes Remedy (N.J. 20901)

(c) **Diabetic Foods.** Not all *diabetic foods* are fraudulent or misrepresented. There are a number of reliable commercial companies producing *special purpose foods* useful for diabetics. These may be fruits canned without added sugar, products sweetened with saccharine, or breads and crackers of low carbohydrate content. Such ethical products are sold with a complete and accurate analysis on the label and may be incorporated according to their nutritive value as a welcome variety in the diabetic menu. They are not recommended as safe for diabetics in unlimited quantities nor are they a necessary part of a diabetic diet.

Criticism is aimed, however, at advertisers of so-called *diabetic foods* who give the erroneous impression that the flour or bread in question has remedial action and may be eaten by diabetics in unrestricted amounts. Unwarranted therapeutic claims have been made regarding several *diabetic foods*⁴² chiefly of the gluten or legume flour type.

3. ARTHRITIS

The widespread and growing interest in arthritis is not difficult to understand when one considers the prevalence of the disease. Most cases of arthritis, no matter which type, are still baffling to the medical profession and there is no known cure or wholly successful therapeutic diet to be recommended. Published reports of clinical experience with various dietary regimes are conflicting. The following have been tried and found wanting:

1. Omission of so-called acid fruits and vegetables.
2. Use of only one type of food constituent at a meal (protein, fat, or carbohydrate).
3. Alteration of the acid-base balance of the diet.
4. Restriction to a low protein diet.
5. Reduction of caloric intake.
6. Restriction of carbohydrate in the diet.

A well-balanced, adequate, high-vitamin diet is now generally recommended by arthritis specialists. In view of the present state of knowledge regarding the treatment of arthritis it is futile to put one's faith in any regime or nostrum

⁴¹ Bur. Inv. J.A.M.A. 105, 218, 1935.

⁴² Committee on Foods. J.A.M.A. 102, 538, 1934; 104, 563, 1935; 105, 1270, 1346, 1431, 1772, 1935.

advertised as a *cure* for arthritis. There are plenty of such on the market, however, and more will continue to appear so long as the unfortunate sufferers from this disease continue to patronize them.

4. FASTING CURES

Another age-old fallacy. Fasting regimes have been heralded as a cure for smallpox, appendicitis, pernicious anemia, colds, rheumatism, and so-called acidosis. To be sure there are digestive disturbances in which food becomes distasteful and may well be left alone until natural appetite returns, but there is no magic in fasting as a cure for disease. The fasting fad is much less popular today than it was a generation ago but occasional enthusiasts are still encountered.

THERAPEUTIC CLAIMS FOR MINERAL OR SPRING WATERS

Since the question of the supposed *health* value of drinking water from some special source occasionally arises, an authoritative answer to this question is in order.¹

Mineral, spring, natural or alkaline waters are usually advertised with unwarranted claims as to their health values. These waters are often alleged to possess curative and medicinal properties.

Analyses of most of these waters do not disclose explanations or evidence for remarkable curative properties. In many cases the deceptive therapeutic claims are the result of hearsay and illusion, or of deliberate scheming to defraud.

Formerly, therapeutic properties were attributed to mineral waters containing lithium or possessing radioactivity. Such characteristics as radioactivity or the presence of lithium in drinking water have not been shown to have useful effects. Strongly radioactive waters may be distinctly harmful. Natural waters contain only traces of lithium. The fortification of waters with lithium salts has no rational foundation; larger doses of lithium may be dangerous.

Spring waters of low mineral content are not to be distinguished physiologically from ordinary potable tap or drinking water; their properties for meeting the water needs of the body are the same. Drinking water should be pleasing to the taste and free from contamination that may produce disease. Therapeutic or curative claims for mineral waters that are not laxative are to be viewed with suspicion.

The daily water requirements for health cannot be defined with any degree of exactness, as activity, temperature and other conditions influence the demands. Sufficient water should be taken with meals and between meals to satisfy thirst. Glutting the body with water is not justified. Under disease conditions the physician should prescribe the water intake.

Good bottled waters of uniform composition of tested purity and freedom from pathogenic contamination at the source and protected from possible contamination during transit to the consumer have special usefulness; they serve as refreshing, pleasing drinking water with a maximum safety assurance and merit the support of popular and professional advertising appropriate for pure potable water.

A pamphlet published by the Bureau of Investigation of the American Medical Association gives a list of several mineral waters which have carried misleading and deceptive advertising.^{4*} The Food and Drug Administration has published notices of judgment against two others: Witter Water (N.J. 21188) and Cal Spa Water (N.J. 20886).

¹ Reference 1 on page 4.

^{4*} Bur. Inv. A.M.A. Pamphlet — Mineral Waters.

THE QUACKS AND HOW THEY OPERATE

Morris Fishbein, editor of the Journal of the American Medical Association, has said that there is a sucker born every minute and a quack every hour to take care of the sixty suckers; that the old *patent medicine* quack used to reach his 10,000 while the modern *food* quack, using high-pressure methods, reaches his 100,000. The accuracy of these statements may be questioned but the implications are correct and worthy of attention. The public today is being exploited by food advertisers more than ever before. Laws can never control the situation completely; the consumer must be well informed and intelligently skeptical if he would protect himself.

The *food* quack today uses many of the same devices, modernized, which Wiley⁴⁴ encountered in fighting the *patent medicine* vendors a generation ago.

Patent medicine makers and sellers hit upon every passing whim and fancy to advertise their goods. The microbe created quite a furor in the public mind, and the nostrums glibly guaranteed to *cure* the microbe in whatever form he might be or in whatever hiding place this monstrous creature might be found. Germs and bacteria replaced the microbe in the public interest and *medicines* sallied forth to attack germs and bacteria.

Wiley also encountered difficulties which are remarkably modern in tone.

One of my hardest tasks in fighting the fake medical fraternity was to overcome the support given them by their own dupes and by the press. Testimonials were easily obtained for a price, as they are today for various products. Obscure and little-known *doctors* as well as preachers, teachers, and men and women in all walks of life, were exploited as endorsers of nostrums. The patent medicine manufacturers furnished a great bulk of the average newspaper's advertising, and therefore its income. Advertising contracts were held as clubs over the heads of the editors and publishers, and many newspapers were definitely under the influence of the quacks.

The typical *food quack lecturer* or pseudo *health promoter* usually has poise, personality and persuasion, which qualities assure him of a hearing and a goodly number of converts. His plausible arguments and glib use of scientific terms inspire false confidence. The letters usually found after his name may be fake degrees given by third-rate institutions sometimes founded for the express purpose of conferring the degree, or *bona-fide* degrees given by reputable institutions whose professional and ethical standards he has long since forsaken. His pseudo-scientific explanations of nutrition and physiology abound in quotations from authentic sources, sometimes misinterpreted, sometimes used correctly along with misleading statements to give the whole an air of authority. The insidious mixture of the true and false is always more difficult to interpret correctly than the glaringly false. The clever quack is well aware of popular interest in the scientific and he works accordingly. Of all quacks the *food faddist* is the most prolific because he gets the *biggest following* — his is a profitable business. He makes converts faster than scientific knowledge can be broadcast because the scientist is conservative and tries to be accurate — the food faddist quite the opposite. Put out of one state, he starts in another; put off the air in the United States, he starts up his own high-powered broadcasting station in another country and keeps on selling his products in the United States. There is less provision for censorship of radio advertising than of printed material sent through the mails.

⁴⁴ Wiley, H. W. Autobiography, Bobbs-Merrill Co., Indianapolis, 1930.

Mail-order quacks usually operate under a variety of high-sounding names. When they have *milked* a victim dry under one firm name, they later solicit him under another name (and perhaps from a slightly different address), so that he will not suspect that all the *come-on* stuff emanated from the same source. Recently the Post Office Department at Washington issued a fraud order against one concern operating under ten different titles.⁴⁵ Another quack⁴⁶ promoting a diabetic fraud started his campaign with a mail-order tabloid. If a victim responded to this advertising *bait* he received the first of a series of mimeographed form letters which gave testimonials and extravagant reports of *cures*. Then followed a series of form letters designed to break down sales resistance and allay the fears of the unfortunate victim. The nostrum, sold under various names, was a mixture of sedatives, stimulants, and laxatives.

Be skeptical of mail-order solicitations and cheap advertising of nutrition nostrums or disease cures. Reliable products will find a market through ethical channels. *Be skeptical of extravagant claims.* The consumer's best protection against fraudulent advertising is a fundamental knowledge of nutrition obtained from reliable sources. Dr. Bogert⁴⁷ has aptly expressed the nutritionist's attitude toward this problem in general.

The fact is that food fads flourish because people want them. It makes little difference to the food faddist whether the particular dietary cult he follows incorporates a few grains of truth along with the dross or not; he is attracted to this cult because it satisfies some craving to try a novel dietary, to be in fashion, to attract attention by being unusual in diet, or from the desire to *do something* about his health. He may benefit by the simpler diet, more regular living, and especially through the belief that he will be helped, but this proves nothing as to the theories on which the cult is based, and the same results might have been more painlessly attained by other means. The food faddist represents a psychological type and often drifts from one dietary cult to another; as long as we have this type of people in such large numbers, diet fads and cults will persist and will be profitable to their originators.

The way to a saner and better balanced judgment about diet lies, of course, through education as to the facts about foods and the body. Knowledge casts out fear and the food cultist trades on fear. Everyone should know the elementary facts as to what constitutes an adequate and balanced diet, along with a few common-sense rules about how diet should be adapted to body build, and how it needs to be altered to cope with adverse conditions like constipation or indigestion. Then people need no longer be bewildered as to what kind of diet to follow, nor agitated by food fads and fancies.

⁴⁵ Bur. Inv. J.A.M.A. 107, 370, 1936.

⁴⁶ Bur. Inv. J.A.M.A. 108, 317, 1937.

⁴⁷ Bogert, L. Jean. Diet and Personality, MacMillan, New York, 1934.

FOOD LEGENDS

One of the best popular food articles of recent date published in *Fortune*,⁴⁵ May 1936, and later reviewed by *Readers Digest* should be read by everyone interested in the subject. The author comments that:

More food notions flourish in the United States than in any other civilized country on earth, and most of them are wrong. They thrive in the minds of the same people who talk about their operations; and like all mythology, they are a blend of fear, coincidence, and advertising.

Possibly some of your own pet theories are included among these food legend gathered from hither and yon and briefly answered here.

1. Q. Are celery and fish special *brain* or *nerve* foods?
A. No! There is no such thing as a *brain* food. Even in starvation, nerve tissue is the last to be deprived of necessary nourishment.
2. Q. Is it dangerous to eat ice cream or *milk* and *sea foods* at the same meal?
A. No! — provided the foods themselves are fresh and in good condition. Spoiled sea food alone may cause serious indigestion.
3. Q. Is it safe to eat *acid fruits* and *milk* at the same time?
A. Yes! Milk is curdled as soon as it comes in contact with the acid gastric juice anyway and the combination of fruit and milk forms a more easily digested curd.
4. Q. Are *green* fruits poisonous?
A. No! They may be digested more slowly than ripe fruits but they are not poisonous.
5. Q. Are *bananas* indigestible?
A. No! A ripe banana (yellow flecked with brown) is well digested even by small children.
6. Q. Do *fruit seeds* cause appendicitis?
A. No! Some people may find that certain fruit seeds aggravate constipation.
7. Q. Is *milk* constipating?
A. No! Milk is not constipating in itself. It is so completely digestible that when it is the sole article of the diet, lack of bowel movement may result from lack of roughage. When green vegetables, fruits, and cereals are included in the diet in reasonable amounts, milk is a most wholesome and valued food.
8. Q. Are *honey* or *brown sugar* good sources of vitamins and minerals?
A. No! Honey and brown sugar carry certain harmless *impurities* which give flavor and color. The small amount of mineral in brown sugar is relatively insignificant. There is no vitamin present in either honey or brown sugar.
9. Q. Are *raw* eggs more digestible than *cooked* eggs?
A. No! Quite the opposite. Soft or hard cooked (not boiled) eggs are more digestible than raw eggs.

⁴⁵ *Fortune*, May 1936, page 86.

10. Q. Is *clear* coffee less harmful than that *sugared* and *creamed*?
A. The effect of caffeine in coffee is not altered by sugar or cream.
11. Q. Is *fresh* coffee more *healthful* than *stale* coffee?
A. No! There is very little difference if any except that of palatability.
12. Q. Is there any ground for the statement that *smoking* aids digestion?
A. No! Quite the contrary. Smoking inhibits normal hunger contractions and the flow of gastric juice — desirable preparatory processes for normal digestion.
13. Q. Does an *athlete* need a *high meat diet*?
A. No! Muscular exercise demands an extra supply of energy foods mostly carbohydrate, not extra protein.
14. Q. Is *garlic* beneficial as a blood purifier or in the treatment of chronic diseases?
A. There is no clinical evidence for therapeutic value in garlic. Most of the so-called garlic tablets or remedies carry only enough garlic to give the odor.
15. Q. Can any one food be called a *complete* or *perfect* food?
A. No! Not even milk, which comes nearest to being an all-round food for children, provides all the essentials. Effort should be made to select a good variety of foods rather than one complete food.
16. Q. Does the use of *excess salt* cause Brights Disease?
A. No! In some cases of Brights Disease (or kidney trouble) the use of salt is curtailed in treatment; it may aggravate but not initiate the trouble.
17. Q. Are *egg whites* (albumin chiefly) injurious to the kidneys?
A. No! Egg albumin is not objectionable to the normal person and does not tend to promote disease of the kidney.
18. Q. Is the *banana* and *milk diet* just another reducing fad?
A. No! Bananas seem to give satiety value to a low caloric diet and the combination of banana and milk for two out of three meals may be a convenient and easy way to reduce.
19. Q. Is it proper to drink *water with meals*?
A. Yes! A moderate amount of water aids rather than hinders digestion.
20. Q. Can any one food be said to *purify* the blood?
A. No! This is a vague and meaningless expression never used in scientific literature.
21. Q. Can any one food *build up resistance*?
A. No! A well-balanced diet providing all necessary minerals and vitamins will promote the best nutrition possible, which in turn should increase resistance to infection.
22. Q. Is *raw milk* a cure or treatment for *syphilis*?
A. No! Scientific medicine finds no basis for this fallacy recently expounded by a prominent physical culturist.

23. Q. "Is milk cancer's ally?"
A. No! Medical and scientific authorities find no evidence to support this theory which was recently expounded in a popular nonscientific magazine article. A later issue of the same magazine carries an article by a well-known authority, refuting this theory.
24. Q. Is the *mineral* content of fruits and vegetables changed in form by *cooking*?
A. No! The form of the mineral is not changed. A small amount may be lost if the water in which they are cooked is not used.
25. Q. Is the nutritive value of *meat* lost by cooking?
A. No! The same nutrients are present in warmed-over meat as in freshly cooked. Certain methods of cooking may decrease the digestibility.
26. Q. Is it safe to leave food *standing* in *opened tin cans*?
A. Yes! If food is properly refrigerated no harm can come from the can.
27. Q. Is it safe to cook or keep *acid foods* in *aluminum* utensils?
A. Yes! Some foods may brighten or darken aluminum but the food is not damaged in any way. Traces of aluminum are not toxic to the body.

SCIENTIFIC OPINIONS ON FOOD FADS AND QUACKERY

The following journal articles and books which discuss various phases of the Food Fad problem in more detail are recommended for further reading. Hygeia — The Health Magazine published monthly by the American Medical Association — always carries reliable health and nutrition information in popular and readable form.

1. ARTICLES

1. Eddy, Walter H., Avoid Dietary Fads
Good Housekeeping, August, 1934, Page 106
(Reducing fads versus sane methods of reducing.)
2. Farren, Marion R., Foods Fads and Faddists
Hygeia, October, 1934, Page 885
(Why should we have food fads? An answer.)
3. Fishbein, Morris, Quacks and Quackery
Hygeia, July, 1936, Page 584
(Amusing and stimulating comments.)
4. Funk, Clarence J., Victims of Advice
Hygeia, December, 1936, Page 1070
(Some disastrous results from following unqualified advice.)
5. Gauss, Harry, Food Fads
Hygeia, March, 1935, Page 210
(Fads, the result of wrong conclusions based on faulty reasoning.)
6. Geraghty, E. M., Watch Your Diet
Hygeia, January, 1937, Page 32
(An article for those whose weight is right.)
7. Joslin, E. P., Diabetes, Doctors, and Dogs
Hygeia, January, February, 1937, Pages 37 and 168
(The story of diabetes and insulin.)
8. Lieb, Clarence W., The "Compatible Eating" Fad
Hygeia, August, 1936, Page 683
(Convincing evidence against this fad.)
9. Rose, Mary Swartz, Belief in Magic
Jour. Amer. Diet. Ass., Vol. 8, 489, January, 1933.
(The origin of magic beliefs with humorous rebuttals.)
10. Stone, Willard J., Dietary Facts, Fads and Fancies
J.A.M.A. 95, 709, September, 1930
(Food fads the result of misinformation, fostered by cultists.)
11. Winters, S. R., Public Enemies Number 1: Food, Drug and
Cosmetic Racketeers
Hygeia, September, 1936, Page 832
(An eye opener to current frauds.)
12. Wonders of Diet
Fortune, May, 1936, Page 86
(Entertaining, reliable, and well illustrated.)

2. BOOKS

1. Cramp, A. J., *Nostrums, Quackery and Pseudo-Medicine*
American Medical Association, 1937
(A factual record of all types of quackery.)
2. Fishbein, Morris, *Shattering Health Superstitions*
Horace Liveright Inc., New York, 1930
(The editor of the Jour. Am. Med. Ass. speaks.)
3. Lamb, Ruth deForest. *American Chambers of Horrors*
Farrar and Rinehart Inc., New York, 1936
(An extensive and intensive analysis of misleading advertising.
The efforts being made and difficulties encountered in attempting
to establish adequate legal supervision and control.)
4. Pitkin, Walter B., *Let's Get What We Want*
Simon and Schuster, Inc., New York, 1935
(Stirs up the consumer to assert his rights against rackets of all
types, not just food frauds.)

3. SOURCES OF INFORMATION

1. American Medical Association
535 North Dearborn, Chicago, Illinois
(Bureau of Investigation — Nostrums and Quacks)
(Council on Food — Food Advertising)
2. Better Business Bureau, Inc.
Crysler Building, New York City
3. Food and Drug Administration
United States Department of Agriculture
Washington, D. C.

(Courteous inquiry about specific products will be answered whenever reliable information is available.)

REFERENCE BOOKS ON NUTRITION

Always consult the latest edition available and if purchasing a book for your own use choose one which offers a late edition. The science of nutrition progresses rapidly; an old book cannot give you the up-to-date information.

1. Bogert. Nutrition and Physical Fitness
W. B. Saunders, Philadelphia
(Useful facts about nutrition expressed in simple language.)
2. Bogert and Porter. Dietetics Simplified — The Use of
Foods in Health and Disease
MacMillan, New York
(An up-to-date scientific text covering normal nutrition, diet
therapy, and cookery. Suitable for nurse, dietitian, or housewife.)
3. Chaney and Alborn. Nutrition
Houghton Mifflin Co., New York
(A scientific text book for college students.)
4. Cooper, Barber, and Mitchell. Nutrition in Health and Disease
Lippincott, Philadelphia
(An up-to-date reference book on normal nutrition, food selection,
diet therapy, and cookery. Suitable for nurse, dietitian, or house-
wife.)
5. Graves. Foods in Health and Disease
MacMillan, New York
(An elementary text and reference book.)
6. Pattee. Practical Dietetics
The Author, Mt. Vernon, N. Y.
(A text book for nurses.)
7. Proudfit. Nutrition and Diet Therapy
MacMillan, New York
(A text book for nurses and dietitians.)
8. Rose. Foundations of Nutrition
MacMillan, New York
(The fundamental principles of human nutrition in non-technical
language.)
9. Sherman. Chemistry of Food and Nutrition
MacMillan, New York
(Authoritative scientific discussion of the science of nutrition.
Assumes a chemical and physiological background.)
10. Mitchell (formerly Thoma). Food in Health and Disease
F. A. Davis Co., Philadelphia
(A text book for nurses and student dietitians.)